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APR 1969

CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

AS OF
MAR. 1, 1969

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

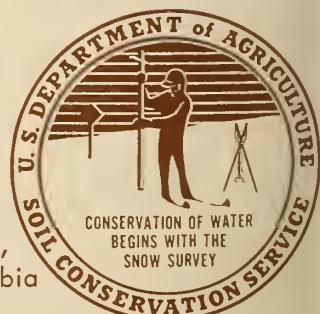
The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80521
Idaho	P. O. Box 38, Boise, Idaho 83707
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

MARCH 1, 1969

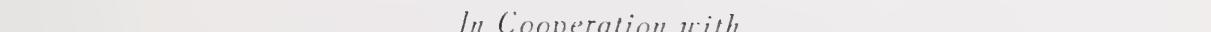
Issued by

KENNETH E. GRANT
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SOIL CONSERVATION SERVICE
WASHINGTON, D.C.



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SOIL CONSERVATION SERVICE
PORTLAND OREGON



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CHRIS L. WHEELER
STATE ENGINEER
STATE OF OREGON



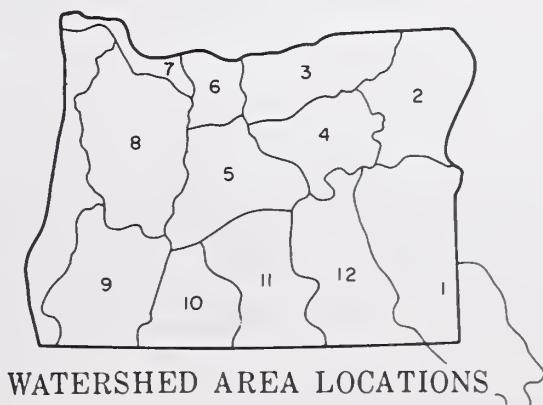
Report prepared by

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HOWARD M. VANCE, Assistant Snow Survey Supervisor
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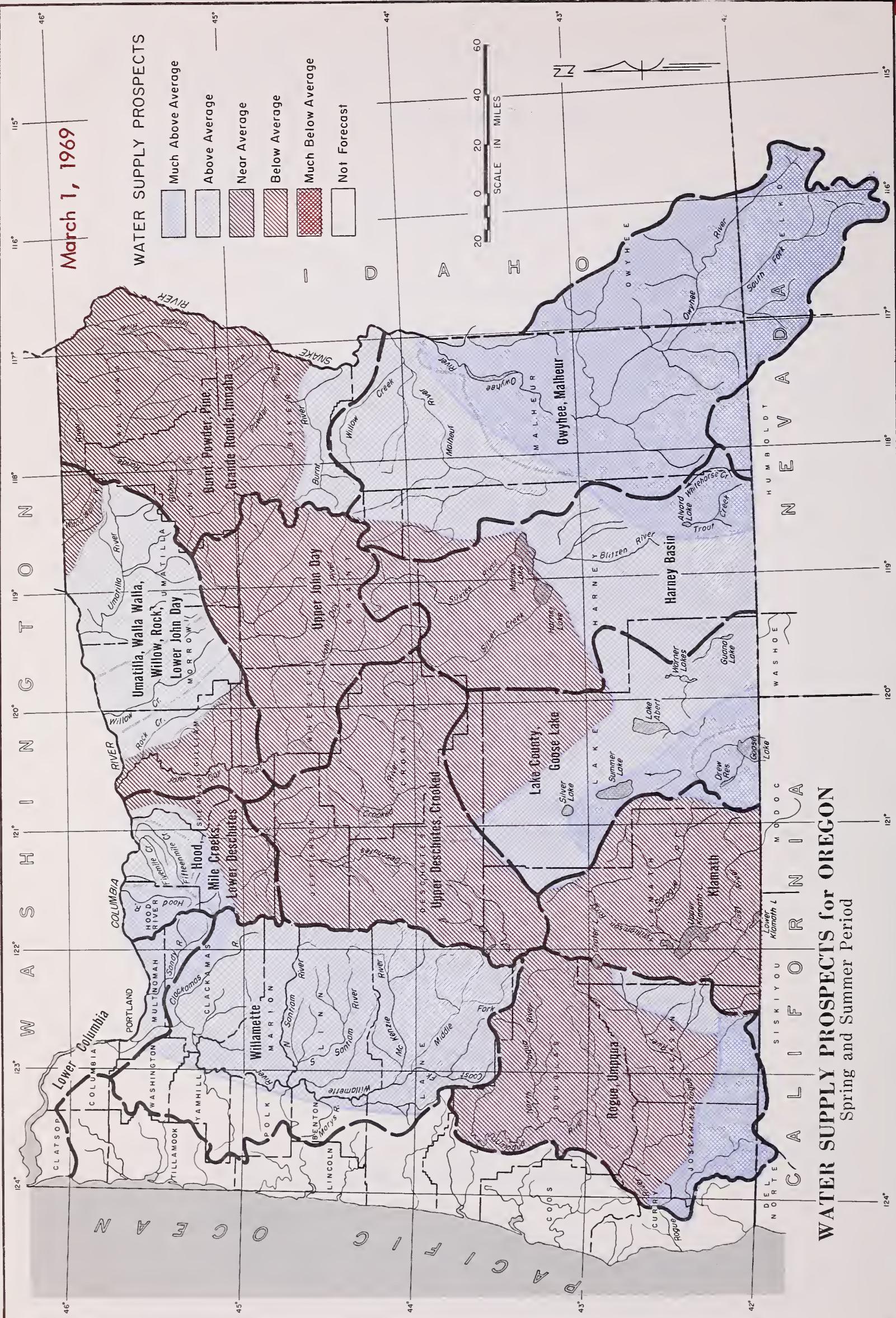
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March 1, 1969

WATER SUPPLY PROSPECTS



WATER SUPPLY PROSPECTS for OREGON

Spring and Summer Period

WATER SUPPLY OUTLOOK for OREGON

March 1, 1969

Oregon farmers, ranchers and other water users will have average to above average water supplies this summer. The mountain snowpack is above normal in all areas of the state. Soil moisture is excellent. Oregon streams will produce near average to far above average amounts of water this summer. Although stored water is currently below average, good streamflow this summer should replenish most of these supplies.

SNOW COVER

The mountain snowpack currently ranges from 130 per cent on the Powder River to 200 per cent of average on the Owyhee watershed. Snowfall in February was below normal in the Northern Cascades, above average in the Rogue and Owyhee Basins and average elsewhere in the State.

PRECIPITATION

Precipitation during November-February winter period, as reported by the U. S. Weather Bureau, has varied from 170 per cent of normal in Malheur County to 95 per cent of average in the Hood River-Lower Deschutes area. Valley precipitation in February was below normal over most of the state.

RESERVOIR STORAGE

On March 1, 25 Oregon reservoirs were storing 1,649,500 acre feet. This is 52 per cent of the usable capacity and 10 per cent below the usual amount stored at this time.

SOIL MOISTURE

Most mountain soils are saturated and will absorb less than usual amounts of snowmelt water.

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STREAMFLOW

February streamflow was mostly below average throughout Oregon, reflecting the below average precipitation received during the month.

Forecasted summer streamflow for the April-September period is as follows:

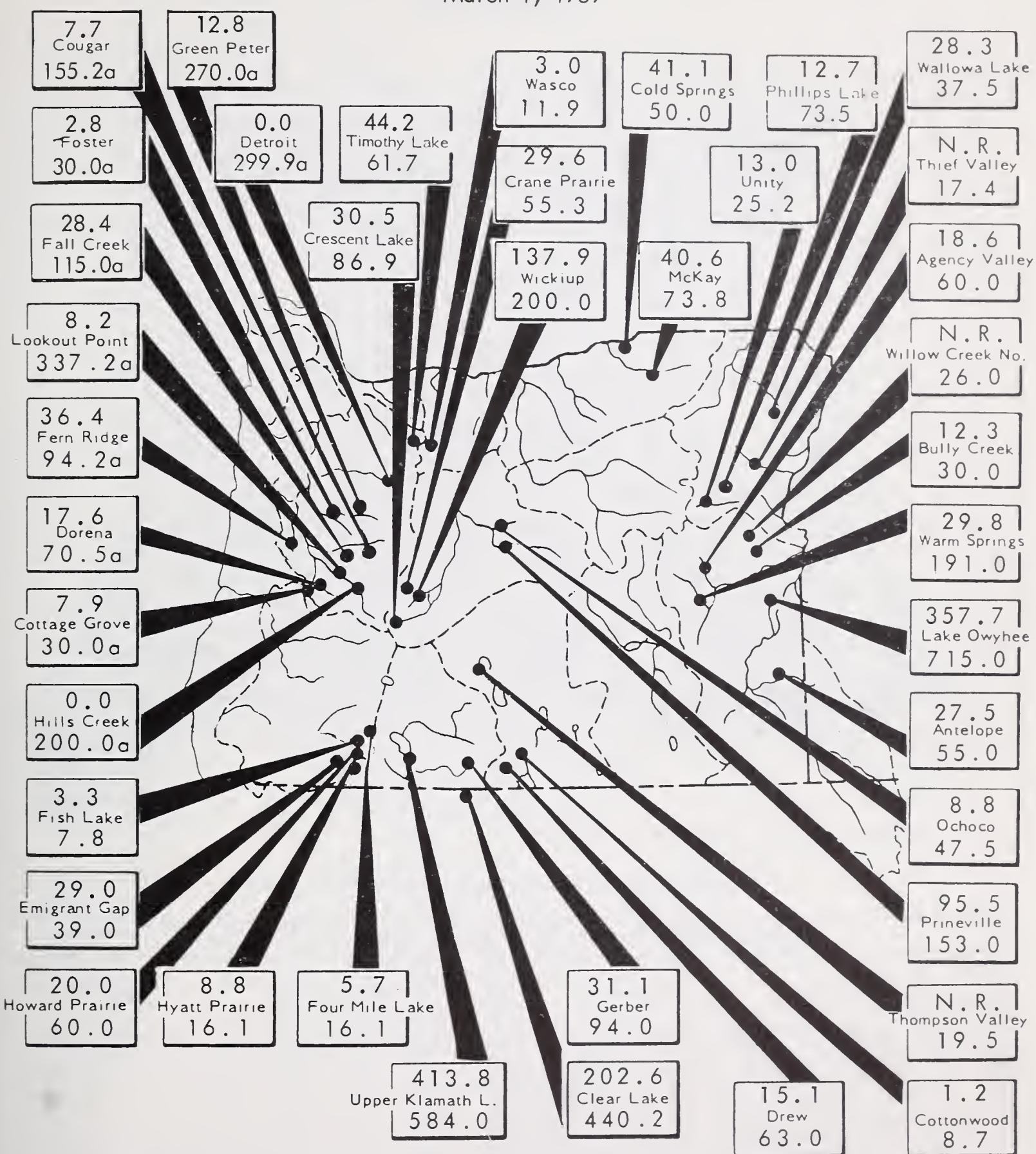
<u>Stream</u>	<u>Forecast</u>	<u>% of 1953-67 Average</u>
Owyhee Reservoir net Inflow	844,000 a.f.	281
Grande Ronde at La Grande	185,000 a.f.	106
Deschutes at Benham Falls	520,000 a.f.	87
Hood near Hood River	444,000 a.f.	132
Mid. Fk. Willamette blw. N. Fk.	997,000 a.f.	120
Rogue at Raygold	1,025,000 a.f.	109
Klamath Lake net Inflow	775,000 a.f.	125



STORAGE STATUS of OREGON RESERVOIRS

usable contents in thousands of acre feet

March 1, 1969



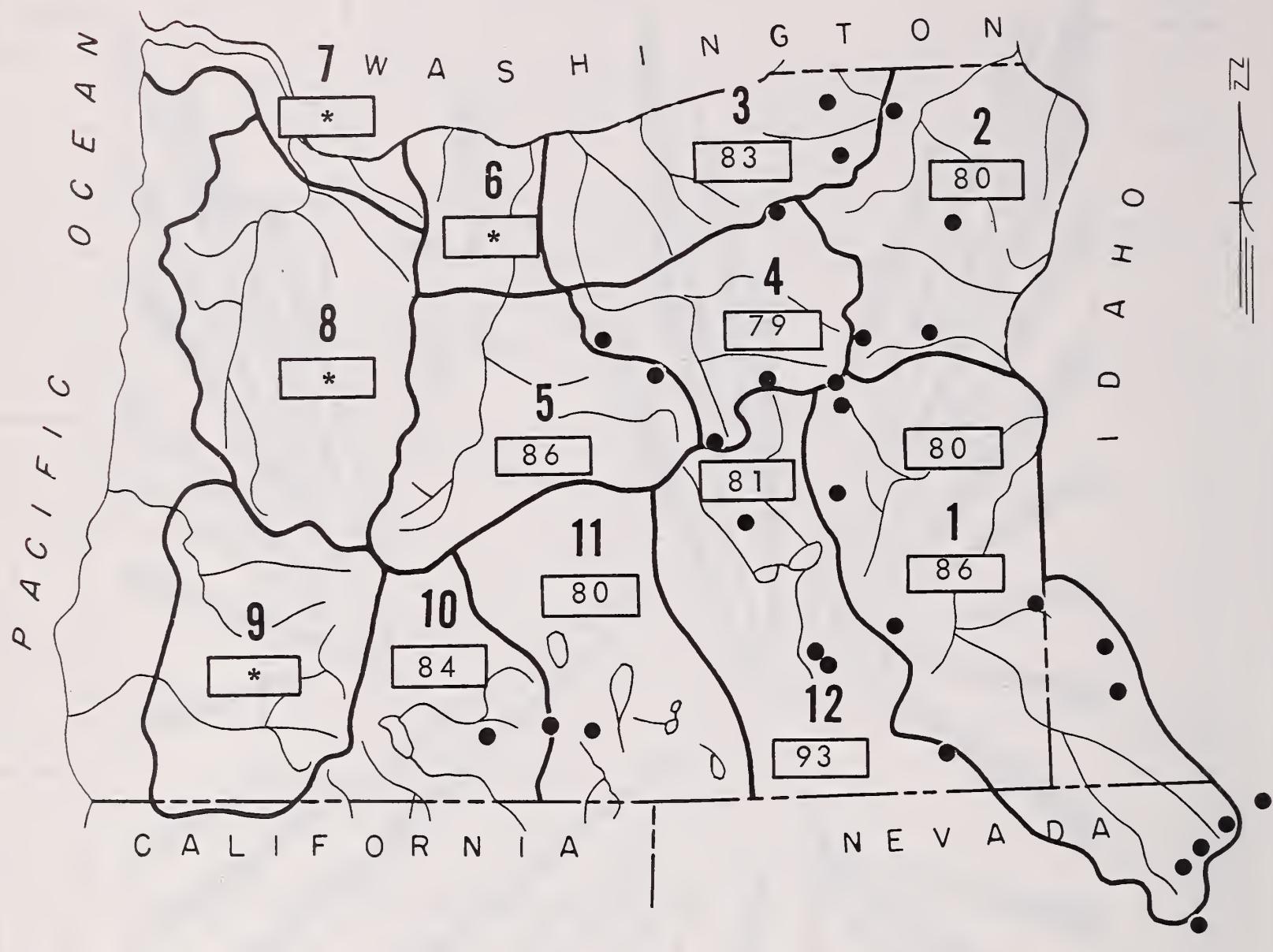
EXPLANATION

687.0 ---Contents
Lake Owyhee
715.0 ---Capacity

(a) Multiple purpose reservoir - space reserved for flood runoff.
N. R. - No report.

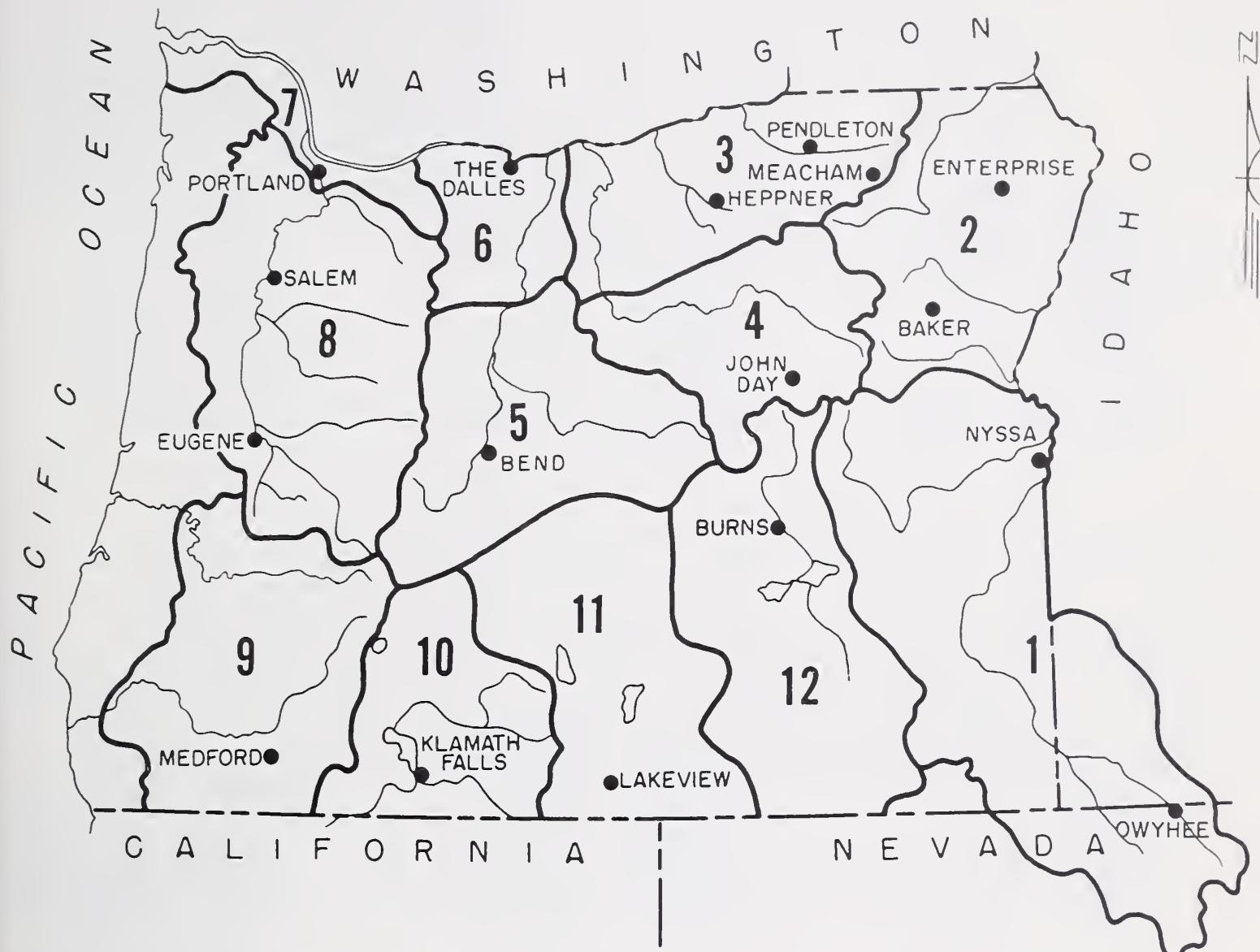
MOUNTAIN SOIL MOISTURE in OREGON as percent of capacity

March 1, 1969



VALLEY PRECIPITATION in OREGON ^a

March 1, 1969



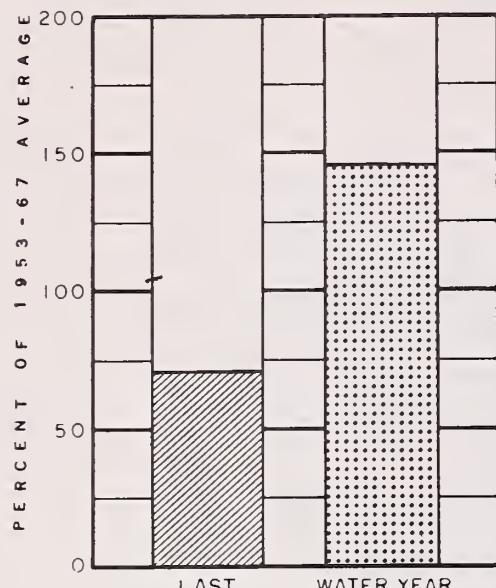
PRECIPITATION as PERCENT of the 1953-67 AVERAGE

STATION	LAST MONTH	WATER ^b YEAR TO DATE	STATION	LAST MONTH	WATER ^b YEAR TO DATE
Baker Apt.	141	141	Lakeview	80	130
Bend	11	72	Meacham	60	97
Burns	140	132	Medford Apt.	66	95
Enterprise	39	107	Nyssa	146	143
Eugene Apt.	67	140	Pendleton Apt.	89	127
Heppner	70	140	Portland Apt	86	135
John Day	79	133	Salem Apt.	74	138
Klamath Falls Apt.	72	97	The The Dalles	49	119
			Owyhee (Nevada)	177	155

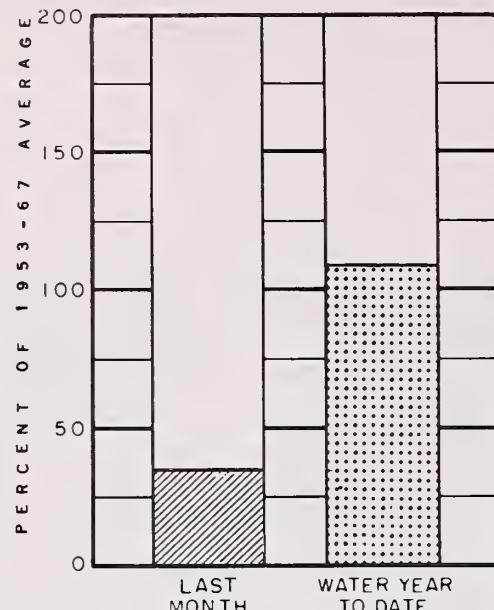
(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

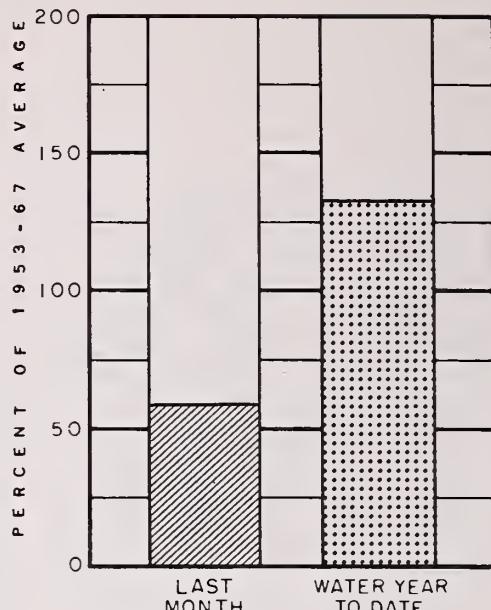
March 1, 1969



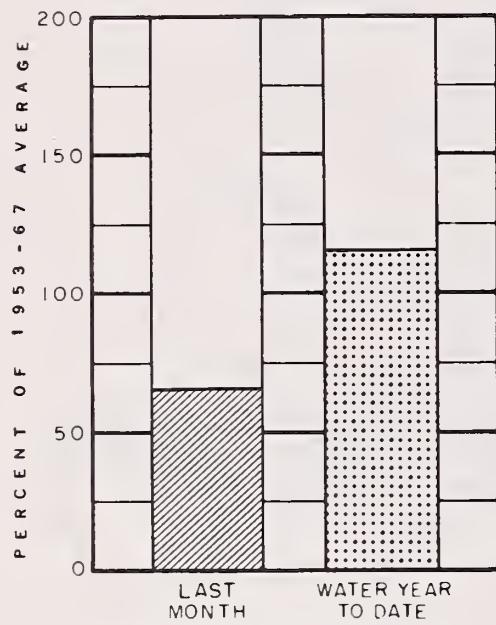
Owyhee Lake net inflow



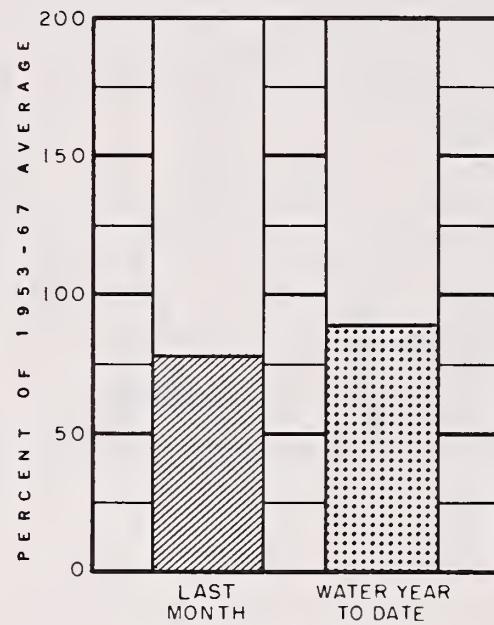
Grande Ronde at La Grande



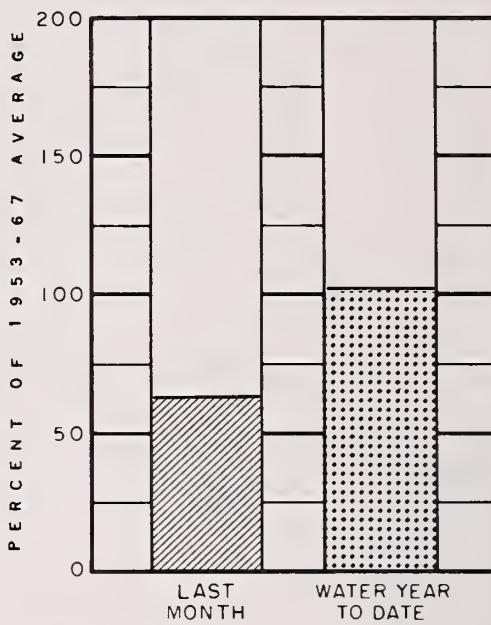
Umatilla at Pendleton



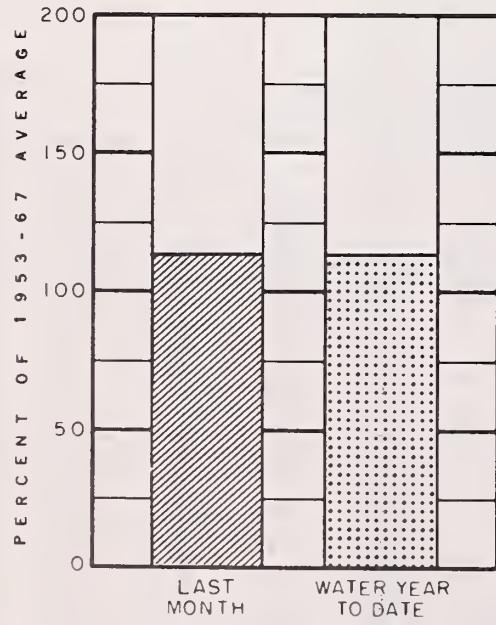
John Day at Service Creek



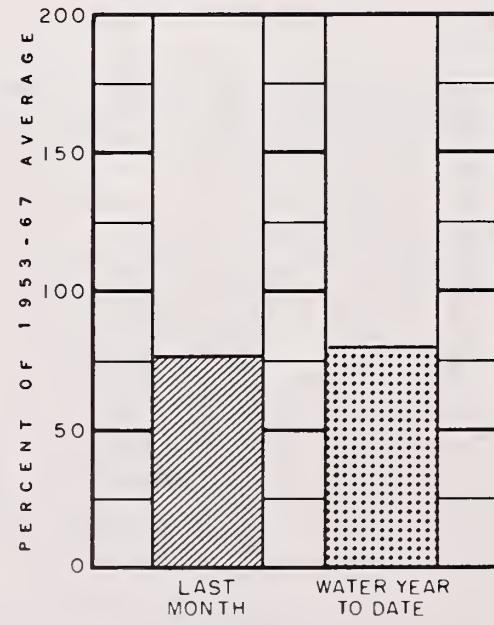
Deschutes at Moody



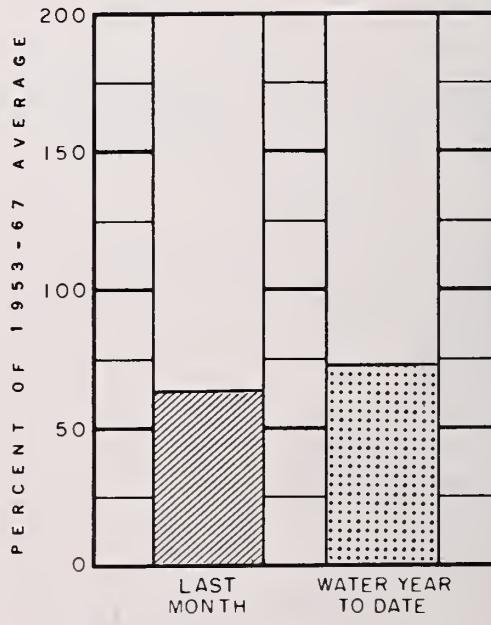
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.; and North and South Boards of Control Owyhee Project.



WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

as of

MARCH 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Abundant water supplies are the outlook for most of Malheur County this summer. Streamflow into Owyhee Reservoir is expected to be second only to the maximum of record received in 1952. The snowpack is above normal throughout the county.

SNOW COVER

The snowpack over the Owyhee watershed is close to the maximum of record that accumulated in 1952. Many low elevation aerial markers are recording the most snow since measurements began in 1958.

The snowpack on the Malheur drainage is less, but is still 150 percent of average.

PRECIPITATION

Precipitation in Malheur County was above average in February. It was 170 percent of normal for the November-February winter period according to the U. S. Weather Bureau.

SOIL MOISTURE

Mountain soils are saturated and will absorb less than usual amounts of snowmelt water.

RESERVOIR STORAGE

On March 1, Warm Springs, Agency Valley and Bully Creek Reservoirs held a combined total of 60,700 acre feet compared to the normal of 137,200 acre feet.

Owyhee Reservoir is about half full and currently contains 358,000 acre feet.

Antelope Reservoir storage is above normal. It is storing 27,500 acre feet compared to the average of 11,800 acre feet.

STREAMFLOW

Spring and summer streamflow as forecasted will be above average. Forecasts are as follows:

<u>Station</u>	<u>Period</u>	<u>Forecast</u>	<u>% of 1953-67 Average</u>
Jordan Cr. abv. Lone Tree Cr.	Apr-July	180,000 a.f.	212
Owyhee Reservoir net Inflow	Mar-July	1,050,000 a.f.	285
Malheur near Drewsey	Mar-July	150,000 a.f.	161
Malheur, No. Fk. at Beulah	Mar-July	100,000 a.f.	142

Report prepared by

TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.)

March 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek	Excellent	Average
Bully Creek	Excellent	Average
Cow Creek	Excellent	Average
Jordan Creek	Excellent	Average
Jordan Valley Irrig. Dist.	Excellent	Excellent
McDermitt Creek	Excellent	Average
Oregon Canyon Creek	Excellent	Average
Owyhee Project	Excellent	Excellent
Succor Creek	Excellent	Average
Tenmile Creek	Excellent	Average
Vale-Oregon Irrig. Dist.	Average	Average
Warmsprings Irrig. Dist.	Average	Average
Willow Creek (Reservoired)	Average	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Agency Valley	60.0	18.6	31.7	30.5
Antelope	55.0	27.5	14.0	11.8
Bully Creek	30.0	12.3	20.9	12.7
Owyhee	715.0	357.7	437.0	411.8
Warmsprings	191.0	29.8	95.8	94.0
Willow Creek #3	26.0	--	--	--

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of March 1, 1969

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
				1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
1780	Jordan Creek above Lone Tree Creek	180	April-July	85 ^m	212
2140	Malheur near Drewsey	150	March-July	93	161
2175	Malheur, North Fork at Beulah ^d	115	April-Sept.	72	160
		100	March-July	67	149
		85	April-Sept.	60	142
1825	Owyhee Reservoir net Inflow ^k	1050	March-July	369	285
		844	April-Sept.	300	281

SOIL MOISTURE

STATION NAME	ELEVATION	PROFILE (Inches)		SOIL MOISTURE (Inches)		
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR
Bear Creek (Nev.)	7800	72	16.8	2/28	11.9	8.8
Big Bend (Nev.)	6700	48	16.7	1/28	13.0 ^f	15.5
Blue Mountain Springs	5900	42	16.9	2/26	10.6	11.3
Crane Prairie	5375	48	18.2	2/28	17.4	15.6
Folly Farm	4450	30	12.5	b		16.2
Jack Creek, Lower (Nev.)	6800	48	8.6	b		
Jordan Valley	4390	48	19.3	2/25	16.5	15.3
Mud Flat (Ida.)	5500	48	12.8	3/2	14.3	13.1
Rodeo Flat (Nev.)	6800	42	11.0	1/29	11.0 ^f	10.9
Stinking Water Summit	4800	48	21.9	2/27	21.5	--
Taylor Canyon (Nev.)	6200	48	15.1	1/28	13.0 ^f	14.6
Triangle (Ida.)	5150	48	16.6	b		12.2

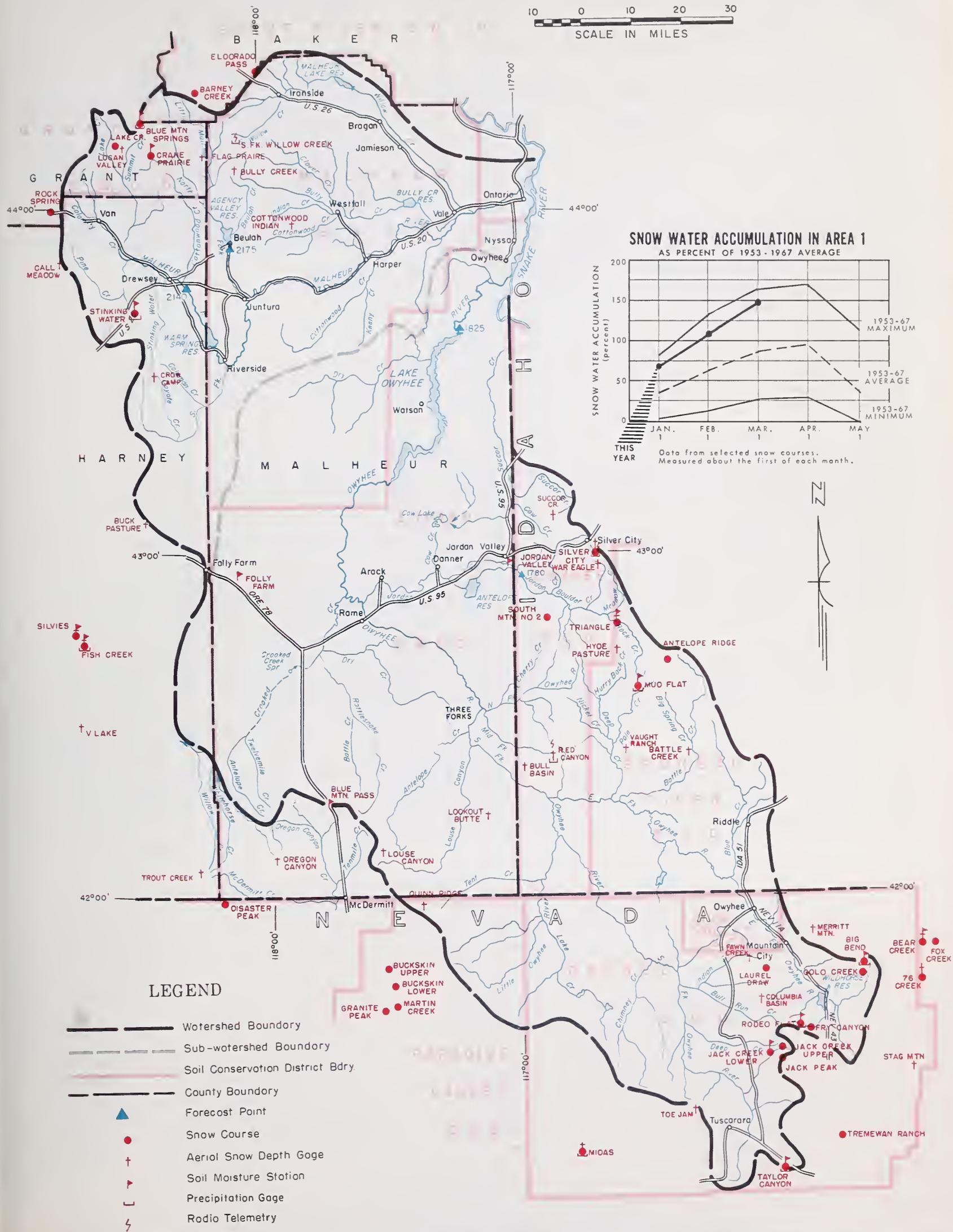
SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR
Antelope Ridge (Ida.)	5900	2/26	48	17.4	T	4.2 ^h
Barney Creek	5950	2/27	38	11.3	4.7	7.0
Battle Creek ^e (Ida.)	5700	2/27	24	7.0	0.0	3.1 ^m
Bear Creek (Nev.)	7800	2/28	75	26.2	13.2	15.3 ^h
Big Bend (Nev.)	6700	2/24	40	11.6	2.9	6.9
Blue Mountain Springs	5900	2/26	54	17.0	9.7	13.7
Buck Pasture ^e	5700	2/27	24	7.9	0.0	2.3 ^m
Buckskin, Lower (Nev.)	6700	2/25	45	13.5	3.0	6.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS

10 0 10 20 30
SCALE IN MILES



SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR
						1953-1967 AVERAGE
Buckskin, Upper (Nev.)	7200	2/25	36	12.1	4.4	7.2 ^h
Bull Basin ^e (Ida.)	5600	2/27	12	3.5	0.0	1.1 ^m
Bully Creek ^e	5300	2/27	30	8.7	0.0	2.7 ^m
Call Meadowe	5340	2/27	26	7.5	0.0	3.5 ^m
Columbia Basin ^e (Nev.)	6650	2/27	48	15.4	0.0	- -
Cottonwood-Indian ^e	4320	2/27	15	4.5	0.0	0.7 ^m
Crane Prairie	5375	3/3	39	11.7	6.7	8.2
Crow Camp ^e	5500	2/27	22	6.4	0.0	1.0 ^m
Disaster Peak (Nev.)	6500	3/1	70	29.0	3.4	12.6
Eldorado Pass	4600	2/26	31	7.9	0.0	2.7 ^h
Fawn Creek ^e (Nev.)	7000	2/27	36	10.8	T	- -
Fish Creek	7900	3/3	78	28.7	13.0	19.6 ^h
Flag Prairie ^e	4750	2/27	37	10.7	0.0	3.4 ^m
Fox Creek (Nev.)	6800	2/28	49	14.4	5.8	7.9 ^h
Fry Canyon (Nev.)	6700	b			0.0	6.0
Gold Creek (Nev.)	6600	b			0.0	4.7
Granite Peak (Nev.)	7800	3/3	64	24.3	11.0	10.7
Hyde Pasture ^e (Ida.)	5800	2/27	42	13.4	0.0	4.2 ^m
Jack Creek, Lower (Nev.)	6800	c				
Jack Creek, Upper (Nev.)	7250	2/27	36	11.2	2.2	8.0
Jack Peak (Nev.)	8420	c			*	
Lake Creek	5120	2/26	41	11.6	5.7	9.4
Laurel Draw (Nev.)	6700	2/26	40	11.0	2.2	6.2 ^h
Logan Valley ^e	5100	2/28	37	10.7	4.3	6.3 ^m
Lookout Butte ^e	5650	2/27	6	1.7	0.0	0.2 ^m
Louse Canyon ^e	6440	2/27	30	8.7	0.0	3.1 ^h
Martin Creek (Nev.)	6700	2/24	61	19.8	5.2	7.8
Merritt Mountain ^e (Nev.)	7000	2/27	36	11.2	- -	- -
Midas (Nev.)	7200	2/27	36	11.2	T	2.5 ^h
Mud Flat (Ida.)	5500	3/2	35	10.4	1.9	4.7 ^h
Oregon Canyon ^e	6950	2/27	37	10.7	8.9	5.2 ^h
Quinn Ridge ^e (Nev.)	6300	2/27	14	4.2	0.0	2.3 ^h
Red Canyon ^e (Ida.)	6500	2/27	36	10.4	0.0	4.8 ^m
Rock Spring	5100	2/28	29	7.3	1.5	4.7
Rodeo Flat (Nev.)	6800	b			0.0	5.5 ^h
76 Creek (Nev.)	7100	2/27	60	19.8	7.0	9.1 ^h
Silver City (Ida.)	6400	2/24	64	22.9	6.7	12.5
Silvies	6900	3/3	44	17.6	2.4	10.7 ^h
Scuth Mountain #2 (Ida.)	6340	2/25	56	23.2	3.4	9.1
Stag Mountain ^e (Nev.)	7800	2/27	36	16.2	2.9	- -
Stinking Water	4800	2/27	30	8.2	0.0	2.7 ^h
Succor Creek ^e (Ida.)	6100	2/27	30	8.7	0.0	5.0 ^m
Taylor Canyon (Nev.)	6200	2/28	38	10.3	0.0	4.2
Toe Jam ^e (Nev.)	7700	2/27	60	19.8	5.0	- -
Tremewan Ranch (Nev.)	5700	2/28	18	4.4	0.0	1.1
Triangle ^e (Ida.)	5150	2/27	6	1.7	0.0	0.6 ^m
Trout Creek ^e	7800	2/27	38	13.7	4.3	6.3
"V" Lake ^e	6600	2/27	42	15.1	0.0	3.6 ^m
Vaught Ranch ^e (Ida.)	5950	2/27	24	7.0	0.0	- -
War Eagle ^e (Ida.)	7700	2/27	78	28.1	- -	- -



WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of

March 1, 1969

**U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

GENERAL OUTLOOK

Water users in Northeast Oregon can expect average water supplies this coming spring and summer.

SNOW COVER

Snow accumulation on March 1 was 122 per cent of normal with average to slightly below average snow fall in February. It is down from 132 per cent on February 1.

PRECIPITATION

The precipitation for the November-February period was 113 per cent of normal, according to the U. S. Weather Bureau.

SOIL MOISTURE

Soils are wetter than usual because of good fall precipitation and will absorb less than usual amounts from snowmelt.

RESERVOIR STORAGE

Wallowa Lake storage is 28,300 a.f. compared to an average of 22,400 acre feet. Unity Reservoir contains 13,000 a.f. compared to 11,900 a.f. on the average.

STREAMFLOW

Streamflow during February was average to slightly below average in Northeast Oregon in contrast to the above average flows experienced in January. The forecast for streams originating in the southern part of this area is much above average because of the heavy snowpack. Selected forecasts for the area are as follows:

<u>Station</u>	<u>April-Sept. Forecast</u>	<u>Percent of 1953-67 Average</u>
Grande Ronde at La Grande	185,000 a.f.	106
Powder near Baker	77,000 a.f.	124
Burnt near Hereford	50,000 a.f.	143
Wallowa, East Fork near Joseph	12,600 a.f.	105
Eagle Creek near Skull Creek	207,000 a.f.	114
Imnaha near Imnaha	327,000 a.f.	100

Report prepared by

TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope	Average	Average
Baker Valley	Average	Average
Big Creek	Average	Average
Clover Cr. (nr. N. Powder)	Average	Average
Cove	Average	Average
Durkee	Average	Average
Eagle Valley	Average	Average
Elgin	Average	Average
Enterprise-Joseph	Average	Average
Hereford-Bridgeport	Average	Average
Imnaha River	Average	Average
LaGrande-Island City	Average	Average
Lostine-Wallowa	Average	Average
No. Powder River-Wolf Cr.	Average	Average
Pine Valley	Average	Average
Powder River-Elk Creek	Average	Average
Summerville	Average	Average
Sumpter Valley	Average	Average
Union-Hot Lake	Average	Average
Unity	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) March 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Thief Valley	17.4		--	--
Unity	25.2	13.0	19.0	11.9
Wallowa Lake	37.5	28.3	25.5	22.4
Phillips Lake	73.5	12.7	--	--

SOIL MOISTURE

STATION	PROFILE (Inches)			SOIL MOISTURE (Inches)			
	NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR
Blue Mountain Summit	5100	36	16.8	2/28	11.2	10.0	11.9
Dooley Mountain	5430	36	9.2	2/24	3.4	3.8	3.1
Emigrant Springs	2925	48	22.3	2/25	21.4	20.5	20.2
Ladd Summit	3730	48	18.9	2/24	10.1	10.2	11.6
Moss Springs	5850	42	25.8	2/25	14.5	16.3	--
Tollgate	5070	48	23.6	2/27	17.6	21.1	18.8

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of March 1, 1969

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
3305	Bear near Wallowa	68	April-Sept.	66	103
2730	Burnt near Hereford d	58	March-June	43	135
		50	April-Sept.	35	143
3200	Catherine near Union	70	April-Sept.	64	109
2882	Eagle Creek abv. Skull Creek	192	April-July	168 m	114
		207	April-Sept.	182 m	114
3190	Grande Ronde at La Grande	230	March-July	207	111
		185	April-Sept.	175	106
3295	Hurricane near Joseph	51	April-Sept.	47	108
2920	Imnaha at Imnaha	327	April-Sept.	327	100
3300	Lostine near Lostine	138	April-Sept.	125	110
2755	Powder near Baker	75	April-July	60	125
		77	April-Sept.	62	124
3250	Wallowa, East Fork near Joseph d	13.1	March-Sept.	12.7	103
		12.6	April-Sept.	12.0	105

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

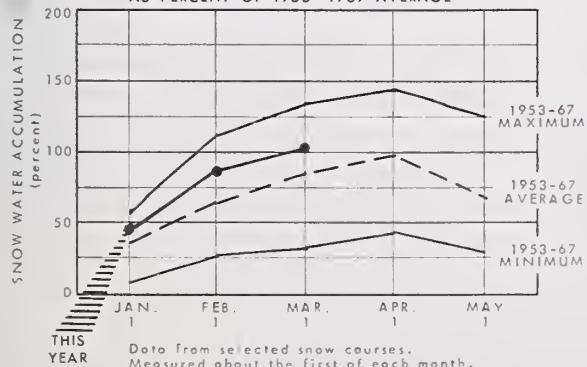
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

A horizontal scale bar with tick marks at 10, 0, 10, 20, and 30. Below the scale, the text "SCALE IN MILES" is centered.



SNOW WATER ACCUMULATION IN AREA 2

AS PERCENT OF 1953 - 1967 AVERAGE



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Boundary
- County Boundary
- ▲ Forecast Point
- Snow Course
- ↑ Soil Moisture Station
- † Aerial Snow Depth Gage
- ↔ Precipitation Gage

Burnt, Powder, Pine, Grande Ronde, Imnaha Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR
Aneroid Lake #1	7480	2/28	109	37.2	32.0	31.2
Aneroid Lake #2	7300	2/28	98	35.6	26.6	26.9
Anthony Lake	6700	2/28	64	22.3	17.8	22.4
Bald Mountain ^e (Ore.)	6700	2/27	36	11.9	9.4	19.9 ^m
Barney Creek	5950	2/27	38	11.3	4.7	7.0
Beaver Reservoir	5340	2/26	43	13.5	7.8	9.2
Big Sheep ^e	6200	2/27	91	30.9	20.9	21.2 ^m
Blue Mountain Summit	5098	2/28	36	11.2	5.1	7.2
Bourne	5800	2/26	55	16.8	11.0	13.7
County Line	4800	2/28	23	6.3	0.5	5.4
Dooley Mountain	5430	2/24	42	12.5	6.9	7.4
Eilertson Meadows	5400	2/25	46	14.3	8.4	9.7
Eldorado Pass	4600	2/26	31	7.9	0.0	2.7 ^h
Gold Center	5340	2/26	46	14.5	9.6	11.0
Goodrich Lake	6775	2/14	114	42.6	30.3	27.9 ^h
Intake House	4930	2/25	49	13.8	10.2	--
Little Alps	6200	2/28	49	15.2	8.8	11.2 ^h
Little Antone	5000	2/28	34	9.5	3.7	--
Lucky Strike	5050	2/26	43	13.5	5.2	10.7 ^h
Meacham	4300	2/25	35	11.5	0.0	8.2
Mirror Lake ^e	8200	2/27	147	52.9	65.9	56.5 ^m
Moss Springs	5850	2/25	63	20.0	13.0	19.9
Power Plant	3990	2/25	30	8.2	5.0	--
Schneider Meadows	5400	2/25	102	26.7	23.8	26.4
Schoolmarm	4775	2/28	21	6.1	0.3	4.6
Standley ^e	7400	2/27	67	24.1	20.9	24.3 ^m
Taylor Green	5740	2/27	52	15.6	10.8	14.4 ^h
Tipton	5100	2/28	40	12.3	5.9	8.9
Tollgate ^e	5070	2/27	72	26.7	5.7	21.5
TV Ridge ^e	7000	2/27	57	18.2	13.0	--



WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

as of
MARCH 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Gilliam, Morrow and Umatilla Counties will experience average to above average water supplies this spring and summer.

SNOW COVER

Snowfall during February brought less than usual amounts to the Blue Mountains. However, the snowpack is still excellent and is 136 per cent of the 1953-67 fifteen year average.

PRECIPITATION

According to the U. S. Weather Bureau, winter precipitation has been 120 per cent of average.

SOIL MOISTURE

Mountain soils are nearly saturated and should absorb less than usual amounts of snowmelt water.

RESERVOIR STORAGE

Stored water in Cold Springs is currently 41,100 acre feet compared to the average of 40,300 acre feet.

McKay contained 40,600 acre feet on March 1 compared to the average of 35,500 acre feet.

STREAMFLOW

Expected streamflow is as follows:

<u>Station</u>	<u>Period</u>	<u>Forecast</u>	<u>% of 1953-67 Average</u>
No. Fk. Walla Walla nr Milton	Apr-Sept	18,000 a.f.	112
So. Fk. Walla Walla nr Milton	Apr-Sept	75,000 a.f.	112
Umatilla at Pendleton	Apr-Sept	185,000 a.f.	119
Butter Creek	Mar-July	17,000 a.f.	137
McKay near Pilot Rock	Mar-July	50,000 a.f.	125

Report prepared by
TOM GEORGE

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PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Walla Walla River, No. Fork	Average	Average
Walla Walla River, So. Fk.	Average	Average
Walla Walla River, Main	Average	Average
Walla Walla River, Little	Average	Average
Couse Creek	Average	Average
Dry Creek	Average	Average
Pine Creek	Average	Average
Umatilla River, Main	Average	Average
Wildhorse Creek	Average	Average
Umatilla R. (Cold Springs Reservoir)	Excellent	Average
Umatilla R. (McKay Res.)	Excellent	Average
McKay Creek	Excellent	Average
Birch Creek	Excellent	Average
Butter Creek	Excellent	Average
Willow Creek	Excellent	Average
Rhea Creek	Excellent	Average
Rock Creek (John Day tributary)	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

March 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Cold Springs	50.0	41.1	38.8	40.3
McKay	73.8	40.6	31.5	35.5

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of March 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
0320	Butter Creek near Pine City	17.0	March-July	12.4	137
0225	McKay near Pilot Rock	50	March-July	40	125
		32	April-Sept.	28	114
0200	Umatilla near Gibbon	120	March-Sept.	99	120
		95	April-Sept.	80	118
0210	Umatilla at Pendleton	271	March-Sept.	208	130
		185	April-Sept.	155	119
0110	Walla Walla, North Fork near Milton	24	March-Sept.	20	120
		18.0	April-Sept.	16.0	112
0100	Walla Walla, South Fork near Milton	89	March-Sept.	79	113
		75	April-Sept.	67	112

SOIL MOISTURE

STATION	PROFILE (Inches)		SOIL MOISTURE (Inches)			
	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION					
Athena-Weston	1700	48	18.7	2/27	12.1	11.6
Battle Mountain Summit	4340	48	13.8	2/27	13.7	12.7
Emigrant Springs	3925	48	22.3	2/25	21.4	20.5
Tollgate	5070	48	23.6	2/27	17.6	21.1

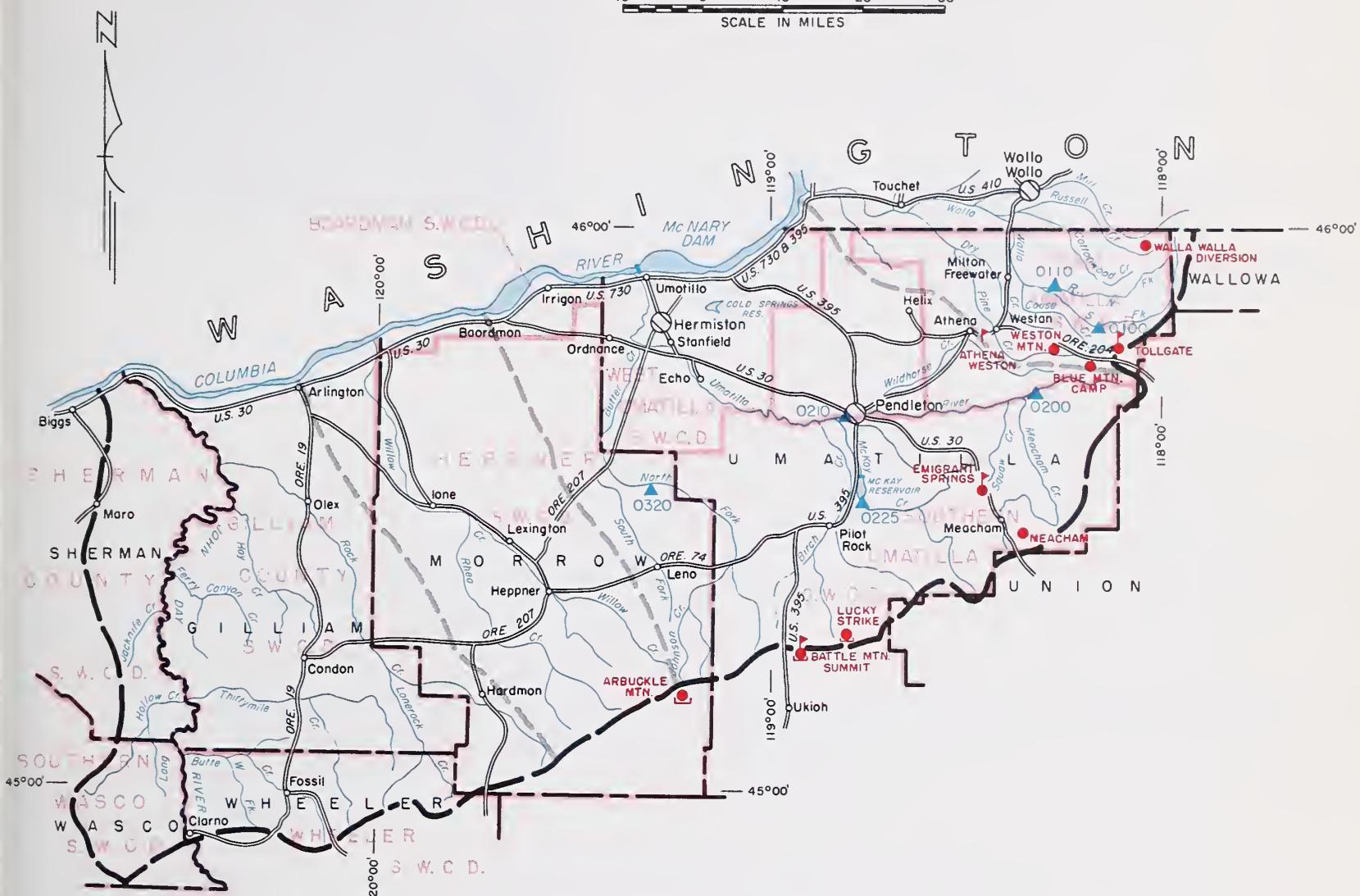
SNOW

SNOW COURSE	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	CURRENT INFORMATION		PAST RECORD	
						LAST YEAR	1953-1967 AVERAGE		
Arbuckle Mountain		5400	2/28	40	12.5	2.9	9.6		
Battle Mountain Summit		4340	2/27	19	4.6	0.0	0.8 ^m		
Blue Mountain Camp		4300	2/27	54	19.8	0.0	12.3 ^h		
Emigrant Springs		3925	2/25	30	10.4	0.0	4.7		
Lucky Strike		5050	2/26	43	13.5	5.2	10.7 ^h		
Meacham		4300	2/25	35	11.5	0.0	8.2		
Tollgate		5070	2/27	72	26.7	5.7	21.5		
Walla Walla Diversion		2400	b						
Weston Mountain		2700	2/27	T	T	0.0	T ^m		

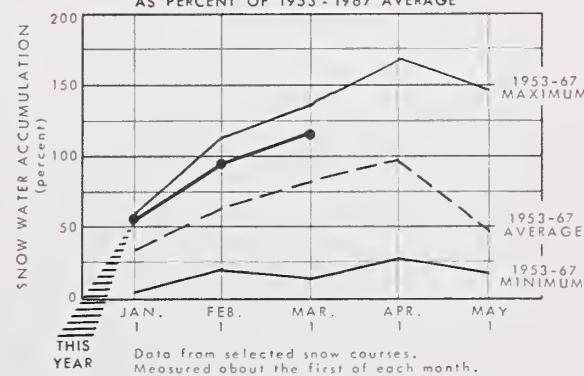
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

10 0 10 20 30
SCALE IN MILES



SNOW WATER ACCUMULATION IN AREA 3
AS PERCENT OF 1953-1967 AVERAGE





WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of

MARCH 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

John Day Basin water users can expect average to above average water supplies this spring and summer.

SNOW COVER

February brought normal amounts of snowfall to the area. The mountain snowpack is 134 per cent of the 1953-67 average and twenty per cent over what is normally expected on April 1.

PRECIPITATION

According to the U. S. Weather Bureau, valley precipitation during the November-February winter period has been 120 per cent of normal.

SOIL MOISTURE

Soil moisture is about the same as last month and should absorb less than the usual amount of snowmelt water.

STREAMFLOW

Forecasted streamflow for the area is as follows:

<u>Station</u>	<u>Period</u>	<u>Volume Forecast</u>	<u>% of 1953-67 Avg.</u>
John Day at Prairie City	Mar-July	63,000 a.f.	123
Jahn Day, Mid. Fk. nr. Ritter	Mar-July	175,000 a.f.	130
Strawberry near Prairie City	Mar-July	8,400 a.f.	107

Report prepared by

TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Beech Creek	Average	Average
Beech Creek-Fox-Long Cr.	Average	Average
Bridge-Mountain Creeks	Average	Average
Camas Creek	Excellent	Average
Cherry Creek	Excellent	Average
Indian-Pine Creeks	Average	Average
John Day River, Main Fork	Average	Average
John Day River, Mid. Fork	Excellent	Average
John Day River, N. Fork	Excellent	Average
John Day River, S. Fork	Average	Average
Monument-Kimberly	Excellent	Average
Strawberry Creek	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) March 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of March 1, 1969

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
0385	John Day at Prairie City	63 59	March-July April-Sept.	51 46	123 128
0440	John Day, Middle Fork at Ritter	175 138	March-July April-Sept.	135 116	130 119
0375	Strawberry near Prairie City	8.4 9.0	March-July April-Sept.	7.9 8.4	107 107

SOIL MOISTURE

STATION NAME	PROFILE (Inches)		SOIL MOISTURE (Inches)				2 YEARS AGO
	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	
Battle Mountain Summit	4340	48	13.8	2/27	13.7	12.7	13.8
Beech Creek	4800	48	21.3	3/3	13.9	14.8	17.0
Blue Mountain Springs	5900	42	16.9	2/26	10.6	11.3	10.8
Blue Mountain Summit	5100	36	16.8	2/28	11.2	10.0	11.9
Derr	5670	24	9.0	3/4	8.9	8.9	8.0
Marks Creek	4540	36	14.1	2/28	11.9	12.2	13.7
Snow Mountain	6300	48	16.7	2/25	13.6	11.5	14.8
Starr Ridge	5150	36	10.6	3/3	10.6	8.8	10.4
Williams Ranch	4500	42	17.9	3/3	17.7	--	17.5

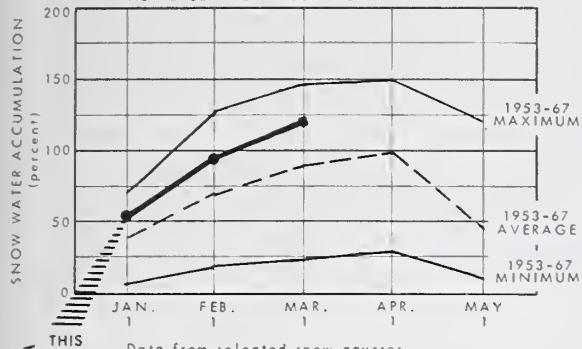
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS

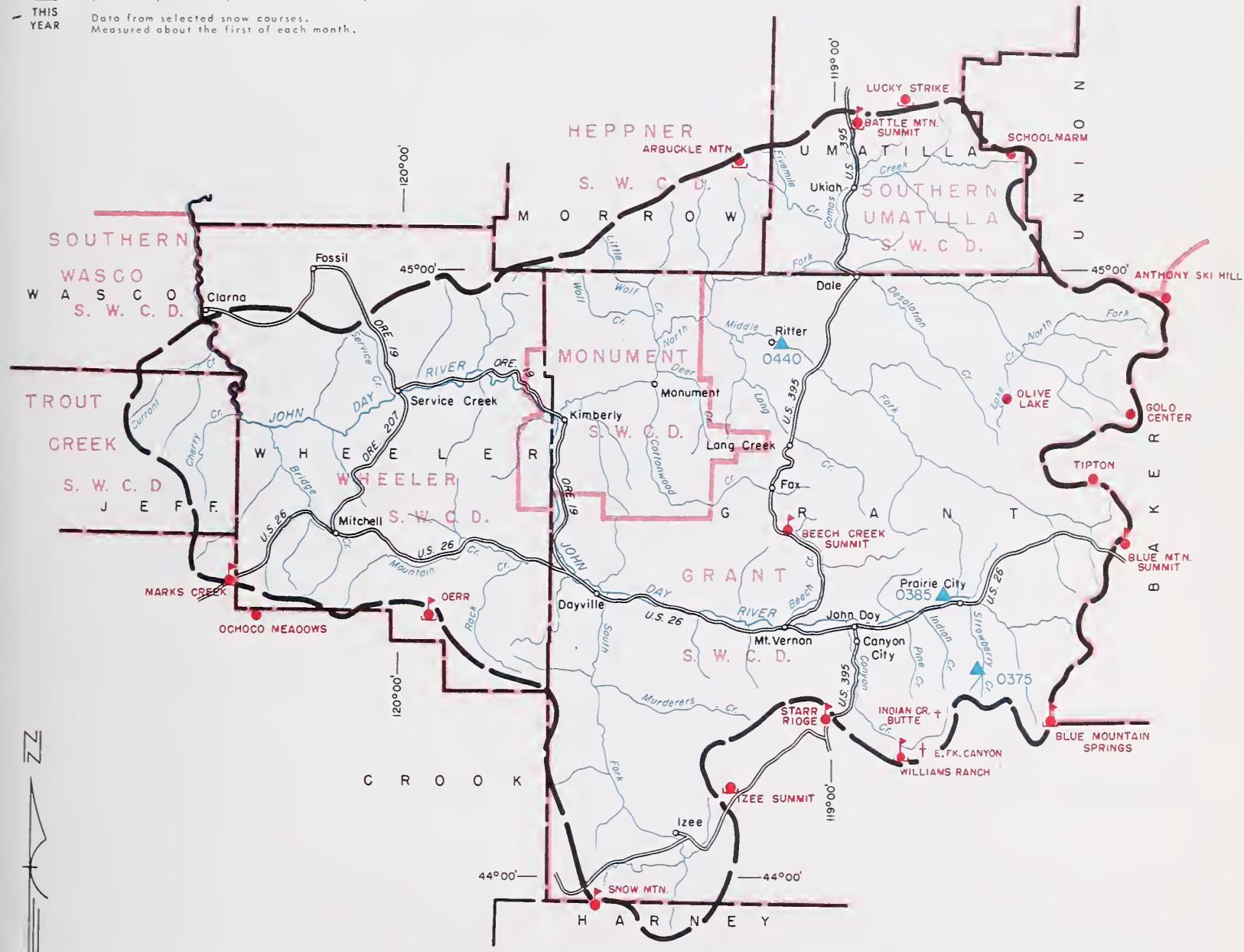
10 0 10 20 30
SCALE IN MILES

SNOW WATER ACCUMULATION IN AREA 4

AS PERCENT OF 1953-1967 AVERAGE



This Year Data from selected snow courses.
Measured about the first of each month.



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- Soil Moisture Station
- † Aerial Snow Depth Gage
- Precipitation Gage

Upper John Day Watersheds

SNOW

SNOW COURSE		DATE OF SURVEY	CURRENT INFORMATION		PAST RECORD	
NAME	ELEVATION		SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1953-1967 AVERAGE
Anthony Lake	7125	2/28	64	22.3	17.8	22.4
Arbuckle Mountain	5400	2/28	40	12.5	2.9	9.6
Battle Mountain Summit	4340	2/27	19	4.6	0.0	0.8 ^m
Beech Creek Summit	4800	3/3	24	6.9	0.0	4.4
Blue Mountain Springs	5900	2/26	54	17.0	9.7	13.7
Blue Mountain Summit	5098	2/28	36	11.2	5.1	7.2
Derr	5670	3/4	39	12.5	2.0	8.3 ^h
East Fork Canyon ^e	5700	3/3	36	10.9	0.0	9.0 ^m
Gold Center	5340	2/26	46	14.5	9.6	11.0
Indian Creek Butte ^e	6550	3/3	70	21.0	13.0	19.3 ^h
Izee Summit	5293	3/3	29	7.2	2.8	6.8
Lucky Strike	5050	2/26	43	13.5	5.2	10.7 ^h
Marks Creek	4540	2/25	25	7.6	0.0	2.9
Ochoco Meadows	5203	2/26	40	12.1	2.2	8.1
Olive Lake	6000	2/25	64	20.8	--	16.5
Schoolmarm	4775	2/28	21	6.1	0.3	4.6
Snow Mountain	6300	2/25	47	14.0	7.4	11.0 ^h
Starr Ridge	5150	3/3	27	7.4	1.2	4.9
Tipton	5100	2/28	40	12.3	5.9	8.9
Williams Ranch	4500	3/3	13	3.4	0.0	1.3 ^m

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of

March 1, 1969

**U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**



GENERAL OUTLOOK

Most water users in the Crooked and Deschutes watersheds can expect average water supplies next spring and summer, if normal weather conditions prevail during the spring months.

SNOW COVER

February storms deposited average to below average amounts of snow in most of the area but the carryover from the generous snowpack in January produced a March 1 snow cover 131 per cent of normal.

PRECIPITATION

According to the U. S. Weather Bureau, precipitation for the period November through February was 121 per cent of normal. Precipitation for the month of February was 73 per cent of normal.

SOIL MOISTURE

Soils in the upper watersheds are currently 86 percent of capacity.

RESERVOIR STORAGE

Ochoco and Prineville Reservoirs currently contain 8,800 acre feet and 95,500 acre feet respectively. This is 32 per cent and 98 per cent of average. The Upper Deschutes reservoirs, Crane Prairie, Crescent Lake and Wickiup currently contain a total of 198,000 a.f. compared to an average of 274,100 acre ft.

STREAMFLOW

Forecasted streamflow for the April-September period are as follows:

<u>Station</u>	<u>Volume</u>	<u>% of 1953-67 Average</u>
Crane Prairie Res. total Inflow	144,000 a.f.	114
Crescent at Crescent Lake	28,000 a.f.	100
Deschutes at Benham Falls	520,000 a.f.	87
Little Deschutes near La Pine	105,000 a.f.	110
Squaw Creek near Sisters	54,000 a.f.	106
Tumalo Creek near Bend	55,000 a.f.	112
Crooked at Post	136,000 a.f.	135
Ochoco Reservoir net Inflow	36,000 a.f.	157

Report prepared by

TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

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PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Arnold Irrigation District	Average	Average
Bear Creek	Average	Average
Beaver Creek	Average	Average
Camp Creek	Average	Average
Central Ore. Irrig. Dist.	Average	Average
Crooked River	Average	Average
Deschutes River	Average	Average
Hay-Trout Creeks	Average	Average
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Average	Average
North Unit Irrig. Dist.	Average	Average
Ochoco Creek	Average	Average
Sisters Irrigation Dist.	Average	Average
Snow Creek Irrig. Dist.	Average	Average
Squaw Creek Irrig. Dist.	Average	Average
Swalley Ditch	Excellent	Excellent
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) March 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Crane Prairie	55.3	29.6	33.1	46.6
Crescent Lake	86.9	30.5	46.1	49.2
Ochoco	47.5	8.8	17.4	27.5
Prineville	153.0	95.5	112.9	97.4 ^m
Wickiup	200.0	137.9	148.1	178.3

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of March 1, 1969

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD		1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
			FORECAST THIS YEAR	1953-67 AVERAGE		
0535	Crane Prairie Reservoir total Inflow	112	March-July	98	114	
		144	April-Sept.	126	114	
0600	Crescent at Crescent Lake ^d	23	March-July	26	88	
		28	April-Sept.	28	100	
0795	Crooked near Post above Prineville Reservoir	175	March-July	140	125	
		136	April-Sept.	101	135	
0645	Deschutes at Benham Falls ^d	347	April-July	393	88	
		520	April-Sept.	596	87	
0500	Deschutes below Snow Creek	80	March-Sept.	73	109	
		72	April-Sept.	66	109	
0630	Deschutes, Little near Lapine ^d	110	March-July	98	112	
		105	April-Sept.	95	110	
0848	Ochoco Reservoir net Inflow	44	March-July	30	147	
		36	April-Sept.	23	157	
0555	Odell near Crescent	35	April-Sept.	30	117	
0750	Squaw near Sisters	54	April-Sept.	51	106	
0730	Tumalo near Bend ^d	55	April-Sept.	49	112	

SOIL MOISTURE

STATION NAME	PROFILE (Inches)		SOIL MOISTURE (Inches)		
	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR
				ELEVATION	2 YEARS AGO
Derr	5670	24	3/4	8.9	8.9
Marks Creek	4540	36	2/28	11.9	12.2
Snow Mountain	6300	48	2/25	13.6	11.5

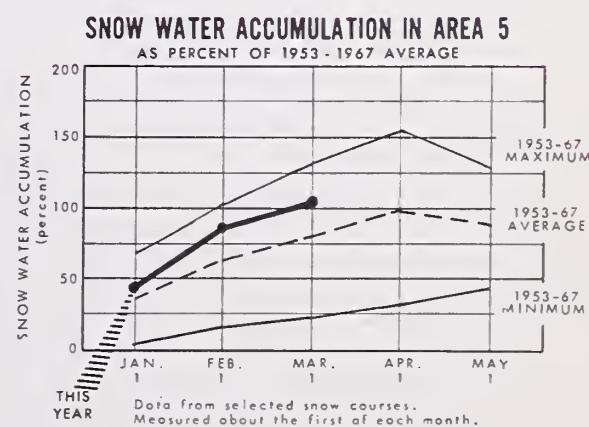
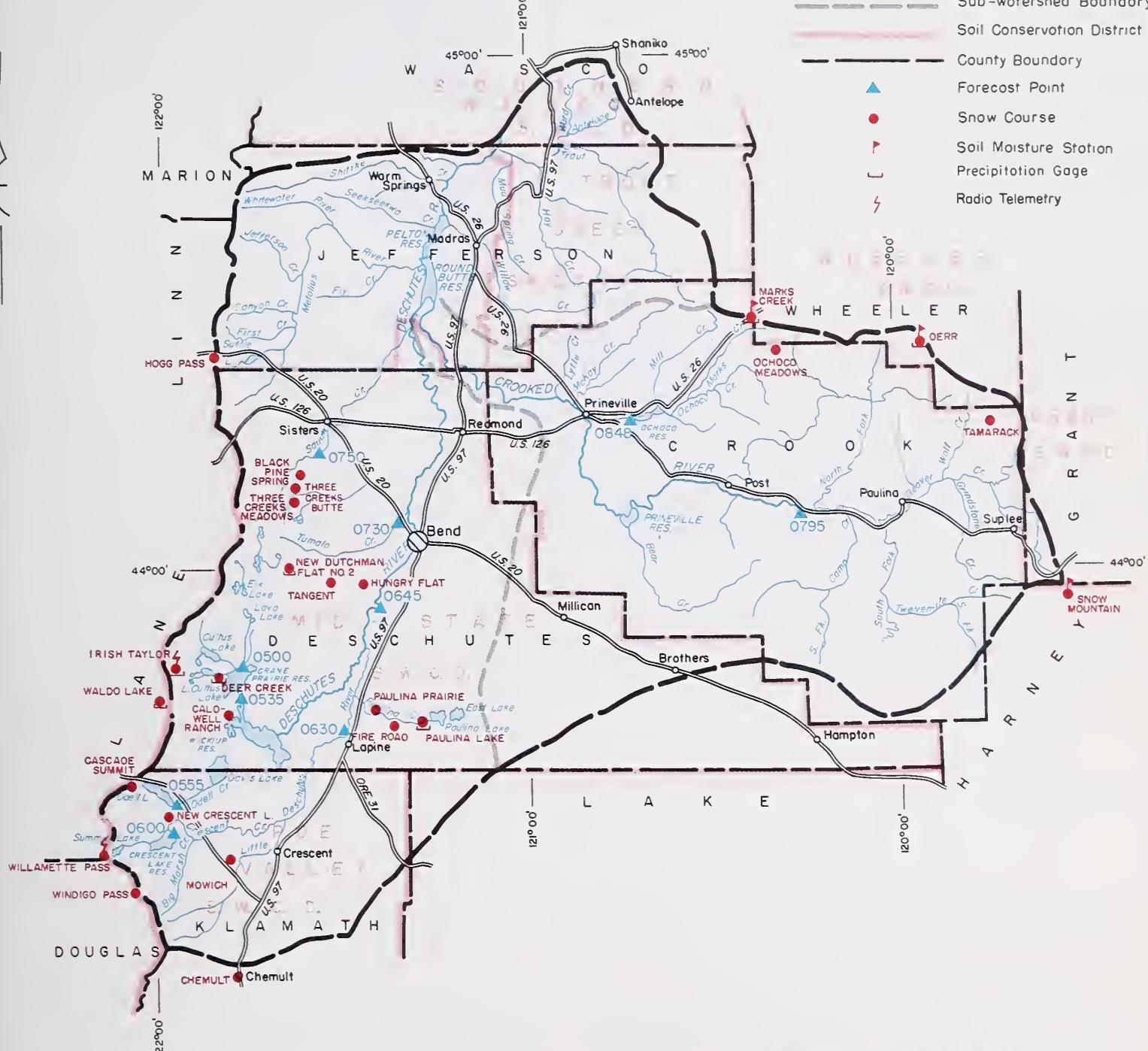
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS

10 0 10 20 30
SCALE IN MILES

LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- Soil Moisture Station
- Precipitation Gage
- Radio Telemetry



Upper Deschutes, Crooked Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1953-1967 AVERAGE
Black Pine Spring	4600	2/28	31	9.6	0.0	3.4
Caldwell Ranch	4400	2/27	40	13.6	5.0	11.5 h
Cascade Summit	4880	2/23	92	32.7	13.1	24.0
Chemult	4760	3/3	46	14.5	6.0	9.7
Deer Creek	4554	2/27	61	21.0	9.3	—
Derr	5670	3/4	39	12.5	2.0	8.3 h
Fire Road	5050	DISCONTINUED				
Hogg Pass	4755	2/28	122	46.7	18.9	33.1
Hungry Flat	4400	2/28	32	10.8	0.0	5.3
Irish Taylor	5500	2/27	103	38.1	15.9	31.5 h
Marks Creek	4540	2/25	25	7.6	0.0	2.9
Mowich	4700	2/23	29	8.7	4.0	4.3 h
New Crescent Lake	4800	2/24	56	19.0	6.5	12.9
New Dutchman Flat #2	6400	2/28	118	48.6	23.4	43.3
Ochoco Meadows	5200	2/26	40	12.1	2.2	8.1
Paulina Lake	6330	DISCONTINUED				
Paulina Prairie	4285	DISCONTINUED				
Snow Mountain	6300	2/25	47	14.0	7.4	11.0 h
Tamarack	4800	2/20	23	6.7	0.7	4.8
Tangent	5400	2/28	69	25.8	13.4	19.8
Three Creeks Butte	5200	2/28	50	17.2	2.8	9.4 h
Three Creeks Meadows	5650	2/28	67	23.9	7.3	16.0
Waldo Lake	5500	2/24	91	32.2	14.3	25.5 h
Willamette Pass	5600	2/25	113	41.6	21.2	33.7 h
Windigo Pass	5800	2/26	113	41.0	20.5	35.2

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS OREGON

as of
MARCH 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Above average water supplies are in prospect for farmers, orchardists and other water users in Hood River-Wasco County area in the spring and summer of 1969. Snowpacks are 175 per cent of average and streamflow forecasts are 131 to 165 per cent of normal.

SNOW COVER

The March 1 water content of the mountain snowpack was 175 per cent of normal compared to over 200 per cent of normal for last month. This reflects the less than usual amounts of snow received during February.

PRECIPITATION

The U. S. Weather Bureau reports the precipitation for November 1 to March 1 was 95 percent of average. The precipitation for February was 54 per cent of normal.

SOIL MOISTURE

Watershed soils under the snowpack are well wetted by the above average fall precipitation and will favor the snowmelt runoff in the spring.

RESERVOIR STORAGE

Clear Lake Reservoir currently contains 3,000 acre feet compared to an average 3,500 acre feet.

STREAMFLOW

Forecasts of expected streamflow for the period April through September are as follows:

<u>Station</u>	<u>Volume</u>	<u>% of 1953-67 Average</u>
Hood River near Hood River	444,000 a.f.	132
Hood R., West Fk. near Dee	211,000 a.f.	131
White River blw. Tygh Valley	228,000 a.f.	162

Report prepared by

TOM GEORGE

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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch (Tony Creek)	Excellent	Average
Badger Creek	Excellent	Average
Dee Irrigation District	Excellent	Average
East Fork Irrig. Dist.	Excellent	Average
Farmers Irrigation Dist.	Excellent	Average
Hood River Irrig. Dist.	Excellent	Average
Juniper Flat	Excellent	Average
Middle Fork Irrig. Dist.	Excellent	Average
Mile Creeks	Excellent	Average
Mill Creek	Excellent	Average
Mount Hood Irrig. Dist.	Excellent	Average
Rock-Gate-Threemile Crs.	Excellent	Average
Tygh Creek	Excellent	Average
White River	Excellent	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

March 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Clear Lake	11.9	3.0	2.3	3.5

SOIL MOISTURE

STATION	PROFILE (Inches)			SOIL MOISTURE (Inches)		
	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION					
Cooper Spur	3490	72	26.4	3/5	14.3	14.0

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of March 1, 1969

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
				i	j
1210	Hood River near Hood River ^d	380	April-July	282	135
		444	April-Sept.	336	132
1185	Hood, West Fork near Dee	185	April-July	140	132
		211	April-Sept.	161	131
1015	White below Tygh Valley	211	April-July	128	165
		228	April-Sept.	144	162

SNOW

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR
NAME	ELEVATION				1953-1967 AVERAGE
Brooks Meadows	4300	3/3	67	23.6	0.0
Clear Lake	3500	3/3	66	23.1	0.0
Clear Lake (Experimental)	3500	3/3	78	26.9	T
Cooper Spur	3490	3/5	65	25.6	0.0
Greenpoint Reservoir	3400	2/20	91	33.1	6.1
Knebal Springs	3850	3/4	56	19.6	0.0
Parkdale	1770	3/5	23	9.2	--
Phlox Point	5400	2/28	160	69.0	20.1
Red Hill	4400	2/24	138	57.8	9.8
Still Creek	3670	2/28	96	37.0	6.4
Switchback	3255	2/27	123	40.0	0.0
Tilly Jane	6000	2/15	130	47.7	16.3
Ulrich Ranch Junction	3350	3/4	44	16.2	0.0
Umbrella Falls	5400	3/1	177	74.0	30.2
Upper Valley	2530	3/5	51	18.8	--

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

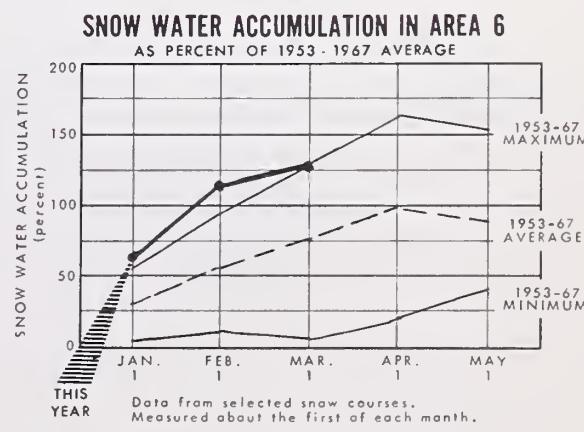
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

10 0 10 20
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- ↑ Aeriel Snow Depth Goge
- Soil Moisture Station
- Precipitation Gage
- Temperature Gage
- ⚡ Radio Telemetry



Hood, Mile Creeks, Lower Deschutes Watersheds

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of

March 1, 1969

**U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

GENERAL OUTLOOK

Good to excellent water supplies are anticipated next summer for the entire Columbia River basin. All streams in the United States portion of the basin are expected to produce above average flows. Forecasts for the main and smaller tributary streams in Idaho, Montana and southeastern Oregon range from about 120% to 280%, while streams in the rest of Oregon and Washington should produce about average to 130 percent of average flows. An extremely serious high water potential exists on many low elevation watersheds in southern Idaho. Here there is a possibility that runoff may be so heavy that some reservoirs on smaller streams may be overtopped. The upper Columbia and Kootenai Rivers in British Columbia are forecast to flow at essentially average amounts.

RESERVOIR STORAGE

Storage in the main irrigation reservoirs remains near average or above in most of the basin. Southern Idaho and Oregon reservoirs, adversely affected by last year's drought, are still deficient but should be restored to a normal or better condition by this year's runoff.

SNOW COVER

Snowpack increases during February were generally near or below average amounts throughout most of the Columbia Basin, except in southeastern Oregon and southern Idaho, where it was above average. Except on the upper Columbia River in Canada, where it is near average, the March 1st. snowpack ranges from about 120 to 200 percent of normal amounts.

SOIL MOISTURE

Soil moisture remains in an above average condition. Many areas are already at or near field capacity and will add to the water yield and speed of runoff.

STREAMFLOW

The flow of the Columbia River at The Dalles, Oregon, as reported by the U. S. Geological Survey, fell a little below average for the first time this season. The record by months for the 1969 water year is as follows:

<u>Month</u>	<u>Percent of Average Discharge</u>			
October	119	(Adjusted for Storage)	"	"
November	128	"	"	"
December	104	"	"	"
January	134	"	"	"
February	95	"	"	"

Report prepared by

TOM GEORGE

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STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of March 1, 1969

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
1057	Columbia at The Dalles	86,890 124,300	April-June April-Sept.	72,406 105,176	120 118

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW ^d (1,000 A.F.)			PEAK (1,000 c.f.s.)	DATE
	APR.—SEPT.	APR.—JUNE	MAY—JUNE		
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

LOWER COLUMBIA WATERSHEDS

10 0 10 20 30
SCALE IN MILES



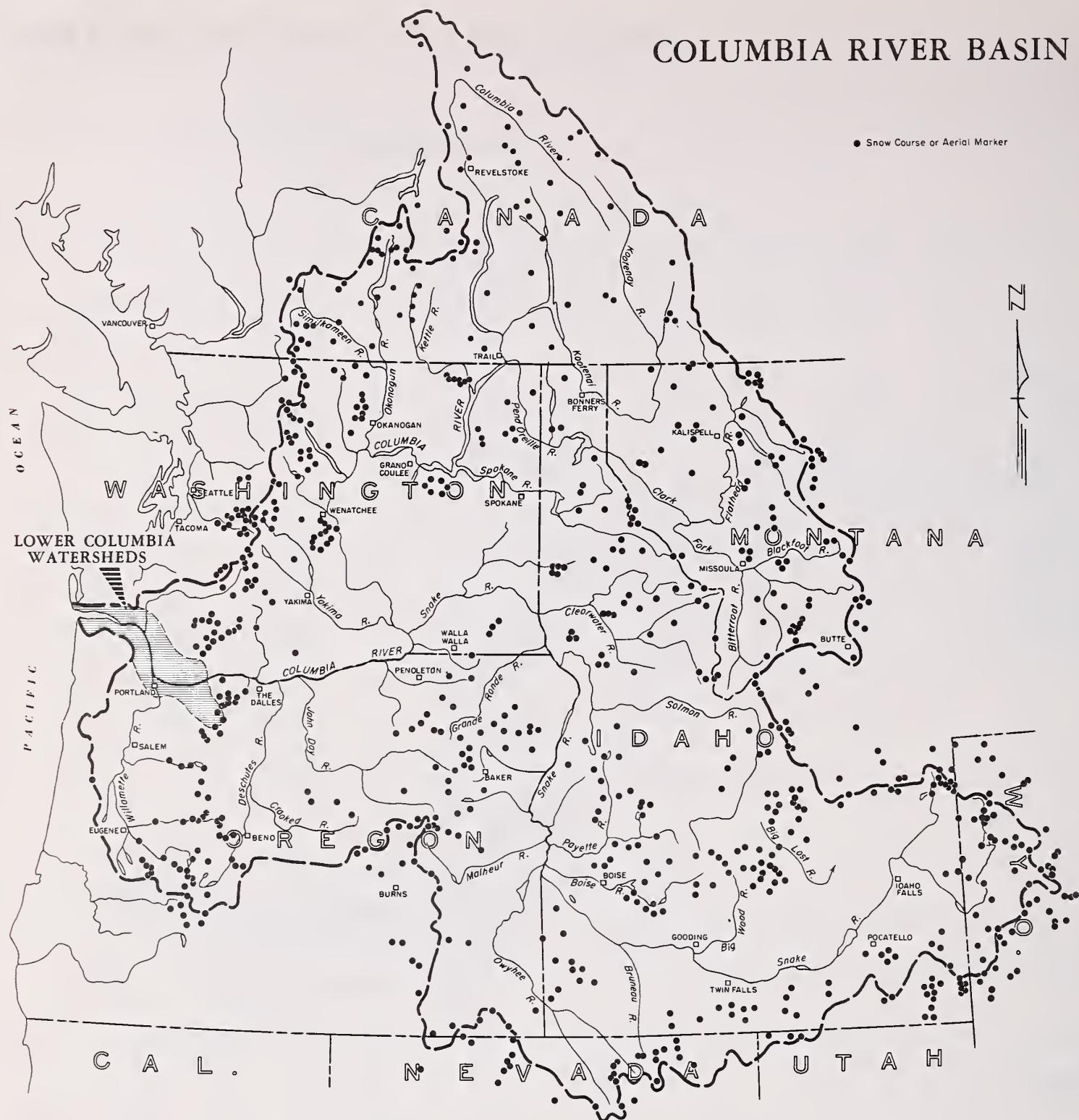
WATERSHED LOCATION

LEGEND

- — — Watershed Boundary
- — — Sub-watershed Boundary
- — — Soil Conservation District Bdry.
- — — County Boundary
- (50) River Miles
- Snow Course
- Temperature
- △ Radio Telemetry

Lower Columbia Watersheds

COLUMBIA RIVER BASIN



"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

MARCH 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Above average water supplies are the prospect for water users in the Willamette Valley during the spring and summer of 1969. The snowpack continued to be above average during February.

SNOW COVER

Less than normal snowfall during February in most of the area resulted in a decrease in the water content of the mountain snowpack, from 177 per cent of average on February 1, to 148 per cent of average on March 1.

SOIL MOISTURE

Soils are well wetted from above average rainfall during November and December.

PRECIPITATION

According to the U. S. Weather Bureau, precipitation in the Willamette Valley during February was down to 51 per cent of normal. It is 112 per cent of normal for the period November through February.

RESERVOIR STORAGE

Most reservoirs in the Willamette Basin are currently at low levels to provide for interception of large amounts of runoff.

STREAMFLOW

Flow of the Middle Fork of the Willamette below the North Fork for October through February was 101 percent of normal. It was 113 per cent for October through January. Streamflow forecasts in the area for the April-September period range from 112 per cent on the Row near Dorena to 140 per cent for the Oak Grove Fork on the Clackamas above the Power Intake.

Report prepared by

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Calapooia	Excellent	Average
Clackamas	Excellent	Average
McKenzie	Excellent	Average
Molalla	Excellent	Average
Santiam, North	Excellent	Average
Santiam, South	Excellent	Average
Willamette, Coast Fork	Excellent	Average
Willamette, Middle Fork	Excellent	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) March 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Cottage Grove	30.0*	7.9	10.5	9.3
Cougar	155.2*	7.7	73.1	--
Detroit	299.9*	0.0	194.2	94.9
Dorena	70.5*	17.6	25.7	21.1
Fall Creek	115.0*	28.4	54.3	--
Fern Ridge	94.2*	36.4	53.6	33.4
Foster	30.0*	2.9	9.4	--
Green Peter	270.0*	12.8	141.2	--
Hills Creek	200.0*	0.0	107.4	63.3
Lookout Point	337.2*	8.1	140.2	116.9
Timothy Lake	61.7	44.2	59.1	47.8

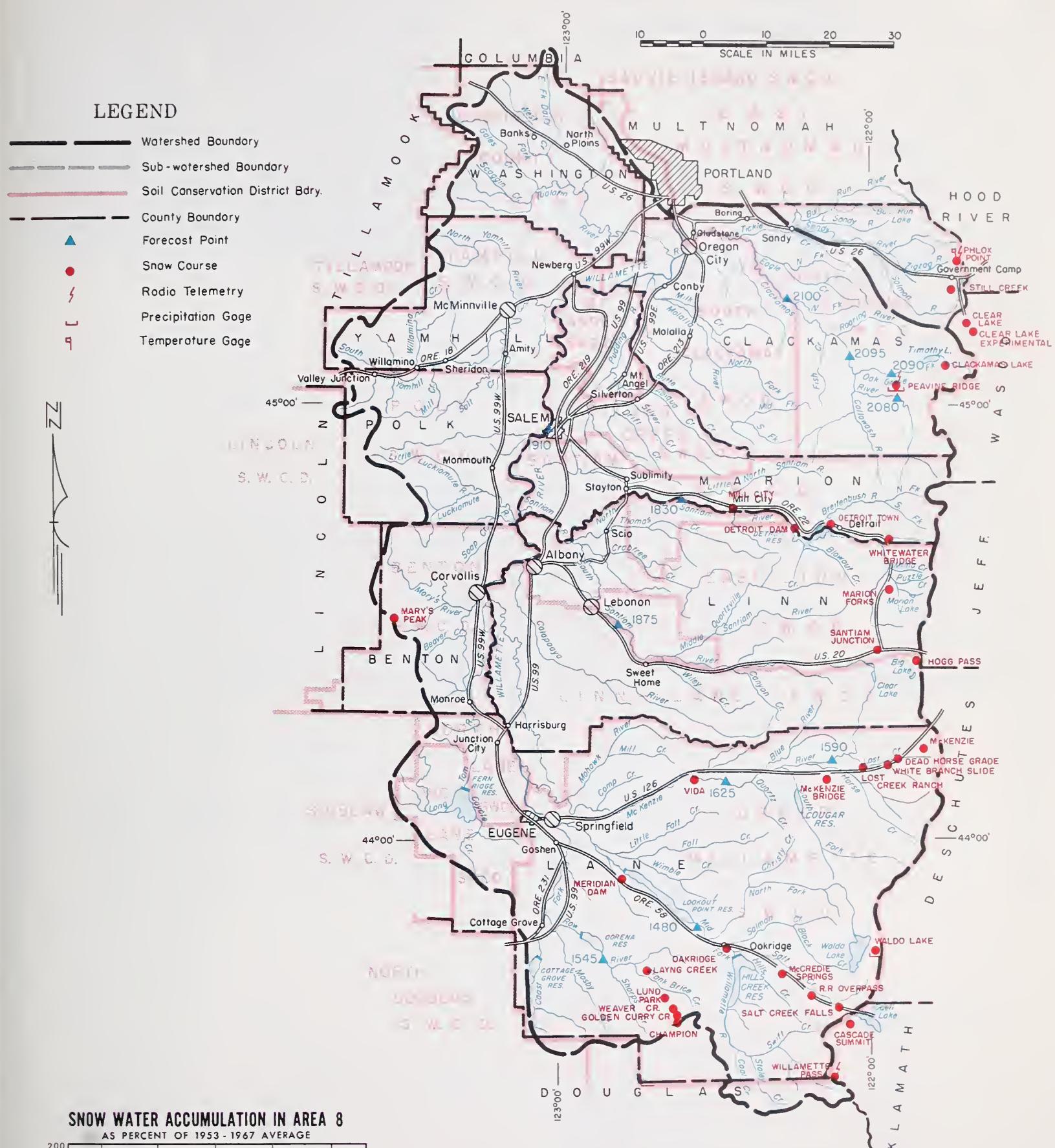
*Multiple purpose reservoir--space reserved primarily for flood runoff.

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of March 1, 1969

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^b
2080	Clackamas at Big Bottom	179	April-July	134	134
		204	April-Sept.	166	123
2100	Clackamas at Estacada	877	April-July	689	127
		1000	April-Sept.	800	125
2095	Clackamas above Three Lynx	690	April-July	517	133
		795	April-Sept.	610	130
1590	McKenzie at McKenzie Bridge	550	April-July	465	118
		710	April-Sept.	614	115
1625	McKenzie near Vida	1230	April-July	1087	113
		1490	April-Sept.	1321	113
2090	Oak Grove Fork above Power Intake	178	April-July	125	142
		229	April-Sept.	163	140
1545	Row near Dorena	119	April-July	106	112
		123	April-Sept.	110	112
1830	Santiam, North at Mehama ^c	1082	April-July	800	135
		1229	April-Sept.	901	136
1875	Santiam, South at Waterloo	705	April-July	596	118
		810	April-Sept.	633	128
1840	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge ^d	894	April-July	725	123
		997	April-Sept.	828	120
1910	Willamette at Salem ^d	5391	April-July	4696	110
		5940	April-Sept.	5199	114

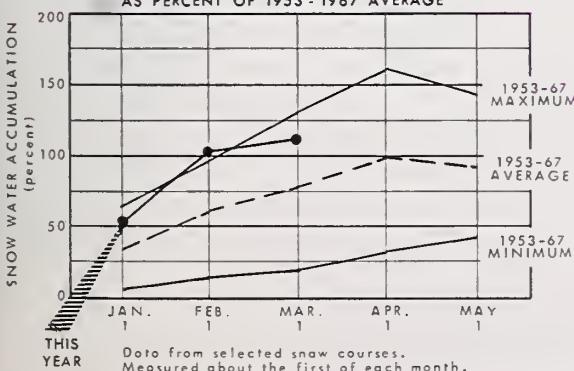
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 8

AS PERCENT OF 1953 - 1967 AVERAGE



Willamette Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR
Cascade Summit	4880	2/28	92	32.7	13.1	24.0
Champion	4500	2/27	107	40.2	8.2	21.9
Clackamas Lake	3400	2/26	64	20.5	4.4	9.9
Clear Lake	3500	3/3	66	23.1	0.0	8.2
Clear Lake (Experimental)	3500	3/3	78	26.9	T	14.5 h
Dead Horse Grade	3800	2/28	72	28.3	3.3	15.2
Detroit City	1610	2/28	18	8.0	0.0	0.5
Detroit Dam	1580	2/28	12	5.2	0.0	0.5
Golden Curry Creek	3136	2/27	42	15.0	0.0	4.7
Hogg Pass	4755	2/28	122	46.7	18.9	33.1
Layng Creek	1200	2/27	T	T	0.0	T h
Lost Creek Ranch	1956	2/28	39	16.3	0.0	3.0
Lund Park	1740	2/27	12	5.2	0.0	0.2
Marion Forks	2730	2/25	67	26.0	8.0	11.1 h
Marys Peak	3620	2/27	100	39.3	0.8	9.0
McCredie Springs	2120	2/28	14	4.8	0.0	0.2
McKenzie	4800	2/28	121	50.6	21.5	35.1
McKenzie Bridge	1372	2/28	16	6.6	0.0	0.2
Meridian Dam	750	2/28	0	0.0	0.0	0.0
Mill City	826	2/28	0	0.0	0.0	0.0
Oakridge	1310	2/28	0	0.0	0.0	T
Peavine Ridge	3500	2/28	80	30.0	7.6	14.1 h
Phlox Point	5400	2/28	160	69.0	20.1	49.5
Railroad Overpass	2750	2/28	25	8.4	0.0	2.4
Salt Creek Falls	4000	2/28	62	21.7	5.7	12.8
Santiam Junction	3990	2/28	91	35.9	7.2	18.8
Still Creek	3670	2/28	96	37.0	6.4	18.4
Timothy Lake	3295	3/5	72	29.3	--	9.6 m
Vida	800	2/28	0	0.0	0.0	0.0
Waldo Lake	5500	2/24	91	32.2	14.3	25.5 h
Weaver Creek	2440	2/27	22	7.6	0.0	0.8
White Branch Slide	2800	2/27	49	20.0	0.0	5.3
Whitewater Bridge	2175	2/28	41	17.1	0.0	3.4
Willamette Pass	5600	2/25	113	41.6	21.2	33.7 h

WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as of

MARCH 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

The prospective spring and summer water supply for the Rogue-Umpqua watersheds are above average.

SNOW COVER

February snowfall increased the mountain snowpack to 177 per cent of average compared to 166 per cent of average on February 1. March 1 water content measurements are as follows: Althouse, 32.3"; Big Red Mountain, 49.0", North Umpqua, 20.8"; Seven Lakes #2, 47.4". This data reflects above average February increases.

PRECIPITATION

The U. S. Weather Bureau reports the precipitation for the November-February period as 105 per cent of average. February precipitation was 53 per cent of average.

RESERVOIR STORAGE

As of March 1 the combined storage in Emigrant Lake, Howard Prairie and Hyatt Prairie Reservoirs was 57,800 acre feet compared to an average of 65,100 a.f. Fourmile Lake held 5,700 a.f. compared to an average of 9,900 acre feet, and Fish Lake had 3,300 a.f. with an average of 5,700 acre feet. With the above-average snowpack all reservoirs should fill to capacity.

STREAMFLOW

Expected streamflow for the April-September period is as follows:

Station	Volume	% 1953-67 Average
Fourmile Lk. net Inflow	8,500 a.f.	207
Hyatt Res. net Inflow	10,000 a.f.	192
*Little Butte, S. Fk. nr. Lk. Cr.	18,500 a.f.	128
Rogue at Raygold	1,025,000 a.f.	109
Applegate near Copper	230,000 a.f.	164
Illinois near Kerby	320,000 a.f.	152
Umpqua, No. below Lemolo Res.	183,000 a.f.	104

These forecasts assume normal climatic conditions from now to the end of the forecast period.

*For April-July period.

Report prepared by

TOM GEORGE

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1218 S.W. WASHINGTON ST.
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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek	Excellent	Average
Applegate River, Big	Excellent	Average
Applegate River, Little	Excellent	Average
Ashland Creek	Excellent	Average
Butte Creek, Big	Excellent	Average
Butte Creek, Little	Excellent	Average
Cow Creek	Excellent	Average
Deer Creek	Excellent	Average
Elk Creek	Excellent	Average
Emigrant Creek (abv. Res.)	Excellent	Average
Evans Creek	Excellent	Average
Gold Hill Irrigation Dist.	Excellent	Average
Grants Pass Irrig. Dist.	Excellent	Average
Grave Creek	Excellent	Average
Illinois River, East Fork	Excellent	Average
Illinois River, West Fork	Excellent	Average
Jump-off-Joe Creek	Excellent	Average
Neil Creek	Excellent	Average
Red Blanket Creek	Excellent	Average
Rogue River	Excellent	Average
Sucker Creek	Excellent	Average
Table Rock Irrig. Dist.	Excellent	Average
Thompson Creek	Excellent	Average
Wagner Creek	Excellent	Average
Williams Creek	Excellent	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) March 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Emigrant Lake	39.0	29.0	25.6	28.3*
Fish Lake	7.8	3.3	3.8	5.7
Fourmile Lake	16.1	5.7	3.0	9.9
Howard Prairie	60.0	20.0	39.8	26.1
Hyatt Prairie	16.1	8.8	9.9	10.7

*Average for years
of record (in base
period) after
reconstruction.

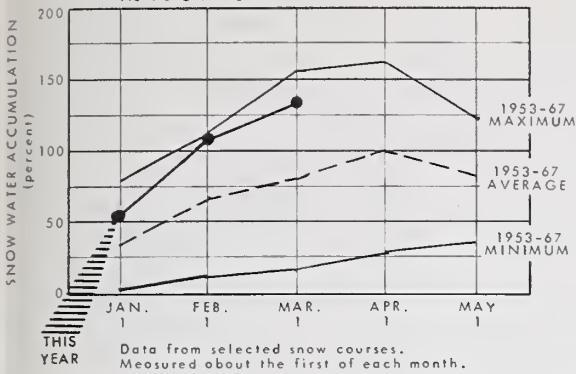
STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of March 1, 1969

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
				AVERAGE	
3620	Applegate near Copper	230	April-Sept.	140	164
3145	Clearwater above Trap Creek ^d	73	April-Sept.	73	100
5045	Fourmile Lake net Inflow ^d	9.1	March-Sept.	4.8	190
		8.5	April-Sept.	4.1	207
5140	Hyatt Reservoir net Inflow ^d	10.0	April-Sept.	5.2	192
3771	Illinois River near Kerby	506	March-July	325 ^m	156
		320	April-Sept.	211 ^m	152
3425	Little Butte, N. Fk. at Fish Lk. nr. Lake Cr. ^d	18.5	April-Sept.	14.4	128
3415	Little Butte, So. Fk. nr. Lake Creek	58	April-July	33	176
	Note: Minimum flow will drop to 100 c.f.s. by June 10.				
3280	Rogue above Prospect	350	April-July	269	130
		390	April-Sept.	326	120
3320	Rogue, South Fork near Prospect ^d	85	April-July	62	137
		98	April-Sept.	74	132
3350	Rogue River below South Fork	650	April-July	570 ^h	114
		790	April-Sept.	708 ^h	112
3590	Rogue at Raygold near Central Point	860	April-July	781	110
		1025	April-Sept.	941	109
3615	Rogue at Grants Pass	1020	April-Sept.	940	108
3135	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d	183	April-Sept.	176	104

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

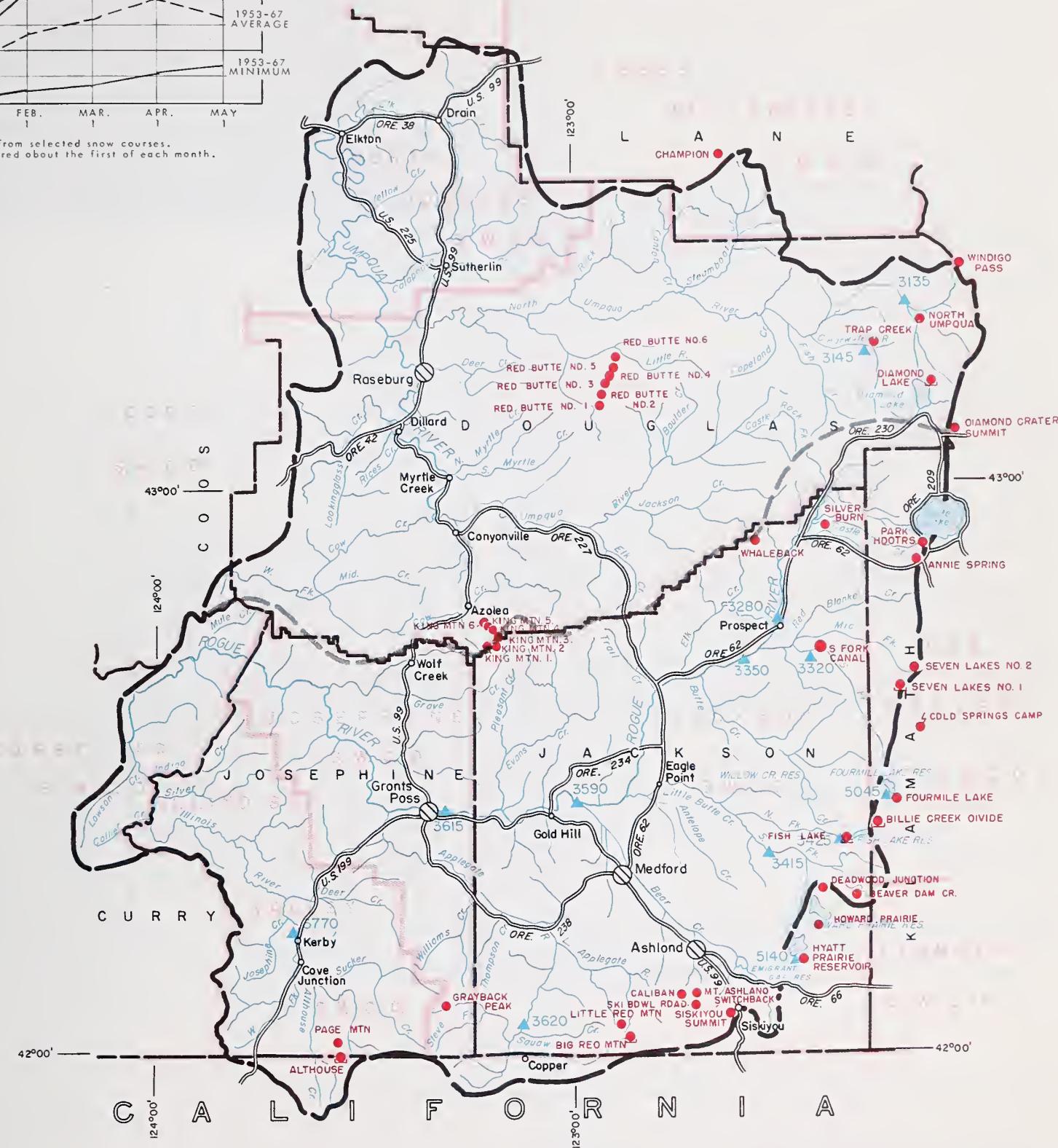
ROGUE, UMPQUA WATERSHEDS

SNOW WATER ACCUMULATION IN AREA 9
AS PERCENT OF 1953-1967 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

10 0 10 20 30
SCALE IN MILES



LEGEND

- — — Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- Precipitation Gage
- ⚡ Radio Telemetry

Rogue, Umpqua Watersheds

SNOW

SNOW COURSE		DATE OF SURVEY	CURRENT INFORMATION		PAST RECORD	
NAME	ELEVATION		SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1953-1967 AVERAGE
Althouse	4530	2/27	86	32.3	0.0	6.0
Annie Spring	6018	2/27	138	47.0	29.0	36.3
Beaver Dam Creek	5100	2/28	69	25.9	5.1	9.6 ^m
Big Red Mountain	6500	3/2	133	49.0	24.0	26.6
Billie Creek Divide	5300	2/27	89	33.2	9.8	18.4
Caliban	6500	2/27	120	46.0	27.7	--
Champion	4500	2/27	107	40.2	8.2	21.9
Cold Springs Camp	6100	2/28	118	42.2	18.7	27.5 ^h
Deadwood Junction	4600	2/28	56	19.4	3.5	8.7 ^h
Diamond Crater Summit	5800	2/24	106	37.1	19.5	30.5 ^h
Diamond Lake	5315	2/24	73	24.0	12.6	18.5
Fish Lake	4865	2/25	72	24.1	4.6	11.7 ^h
Fourmile Lake	6000	c				
Grayback Peak	6000	2/28	134	48.2	15.4	24.9
Howard Prairie	4500	2/28	55	17.9	5.7	8.4 ^h
Hyatt Prairie Reservoir	4900	2/28	56	19.4	1.9	7.4 ^h
King Mountain #1	4500	2/21	58	22.3	4.7	--
King Mountain #2	4000	2/21	58	20.8	T	--
King Mountain #3	3648	2/21	26	9.6	0.0	--
King Mountain #4	3049	2/21	0	0.0	0.0	--
King Mountain #5	2380	2/21	0	0.0	0.0	--
King Mountain #6	1820	2/21	0	0.0	0.0	--
Little Red Mountain	6500	3/1	124	43.4	16.1	21.6
Mt. Ashland Switchback	6400	b			29.0	--
Mule Creek*	3680	2/27	73	28.9	--	--
North Umpqua	4215	2/27	52	18.9	4.6	12.0 ^h
Page Mountain	4045	2/27	61	18.7	0.0	4.3 ^h
Park Headquarters	6450	2/28	160	59.4	35.6	47.5
Red Butte #1	4560	2/25	84	30.2	5.9	10.8 ^h
Red Butte #2	4000	2/25	62	22.5	0.0	7.2 ^h
Red Butte #3	3500	2/25	42	13.8	0.0	7.2 ^h
Red Butte #4	3000	2/25	22	9.4	0.0	2.4 ^h
Red Butte #5	2500	2/25	14	5.9	0.0	T ^m
Red Butte #6	2000	2/25	6	2.6	0.0	0.0 ^m
Seven Lakes #1	6800	2/26	163	58.8	26.5	45.6
Seven Lakes #2	6200	2/25	137	47.4	24.1	32.1 ^h
Silver Burn	3720	2/27	66	24.1	8.1	11.3
Siskiyou Summit	4630	2/28	58	21.5	1.2	5.7
Ski Bowl Road	6000	2/27	110	36.7	23.2	--
South Fork Canal	3500	2/28	24	9.2	0.0	1.7
Trap Creek	3800	2/28	47	18.6	4.6	10.0 ^h
Whaleback	5140	2/28	109	39.2	20.1	27.5
Windigo Pass	5800	2/26	113	41.0	20.5	35.2

*New course.



WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of

MARCH 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Streamflow in the Klamath Basin for the March-June period will be above average with excellent to above average irrigation water supplies available for this spring and summer. The mountain snowpack is much above average and soil moisture is average for the area.

SNOW COVER

The water content of the mountain snowpack was 165 per cent of normal on March 1, compared to 168 per cent of the 1953-67 average on February 1.

PRECIPITATION

Winter precipitation, November 1 to March 1, was 116 per cent of average and for the month of February 79 per cent of average, as reported by the U. S. Weather Bureau.

SOIL MOISTURE

The soil moisture below the snowpack is about 84 per cent of capacity.

RESERVOIR STORAGE

Upper Klamath Lake contains 413,800 a.f. of water compared to an average of 421,500 a.f. Gerber Reservoir holds 31,100 a.f. compared to its normal of 48,600 acre feet. Clear Lake Reservoir holds 202,600 a.f. compared to the usual amount of 227,300 a.f.

STREAMFLOW

Forecasts of expected streamflow for the March through June period of 1969 are as follows:

	<u>Volume</u>	<u>% of 1953-67 Average</u>
Clear Lake Reservoir Inflow	138,000 a.f.	216
Gerber Reservoir Inflow	74,000 a.f.	231
Sprague River near Chiloquin	368,000 a.f.	123
Inflow to Upper Klamath Lake	747,000 a.f.	121
Williamson River below Sprague	546,000 a.f.	118

Report prepared by
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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley	Excellent	Average
Lost River (Clear Lake)	Excellent	Average
Lost River (Gerber)	Excellent	Average
Lost River (Willow Res.)	Excellent	Average
Sprague River	Excellent	Average
Upper Klamath Lake	Excellent	Average
Williamson River	Excellent	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) March 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Clear Lake	440.2	202.6	213.0	227.3
Gerber	94.0	31.1	59.7	48.6 ^m
Upper Klamath Lake	584.0	413.8	448.9	421.5

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of March 1, 1969

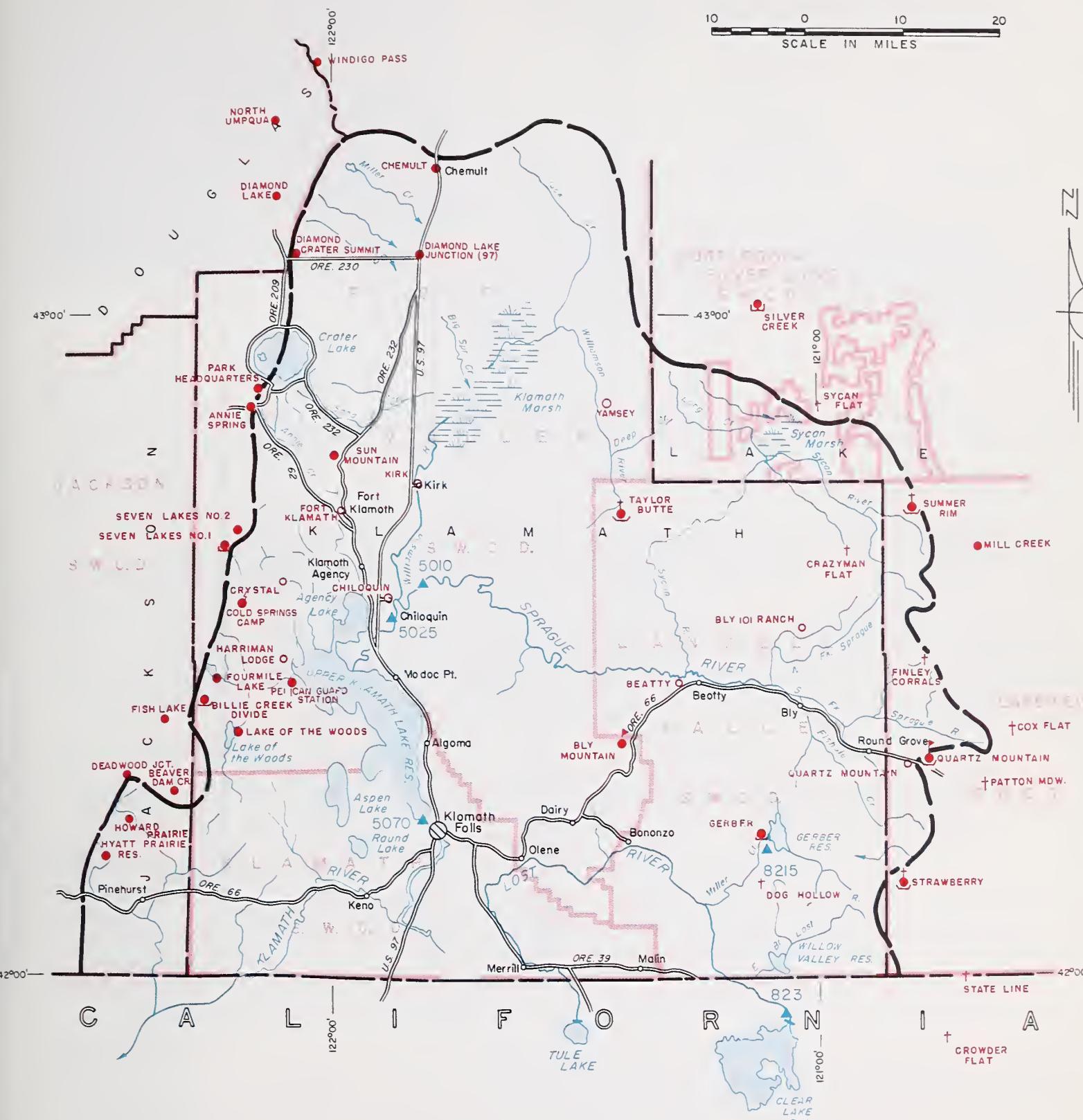
NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
823	Clear Lake Reservoir Inflow ^k	138	March-June	64	216
8215	Gerber Reservoir Inflow ^k	74	March-June	32	231
5010	Sprague near Chiloquin	368	March-June	299	123
		386	April-Sept.	296	130
5070	Upper Klamath Lake net Inflow ^k	747	March-June	619	121
		775	April-Sept.	619	125
5025	Williamson below Sprague River	546	March-June	464	118
		610	April-Sept.	475	128

SOIL MOISTURE

STATION NAME	PROFILE (Inches)		SOIL MOISTURE (Inches)			
	DEPTH	CAPACITY	DATE	THIS	LAST	2 YEARS
				YEAR	YEAR	AGO
Bly Mountain	5090	42	14.0	2/25	11.8	9.3

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS



Klamath Watersheds

SNOW

SNOW COURSE		DATE OF SURVEY	CURRENT INFORMATION		PAST RECORD	
NAME	ELEVATION		SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR
Annie Spring	6018	2/27	138	47.0	29.0	36.3
Beatty (PP&L)	4300	2/27	6	1.8	--	0.1 ^m
Billie Creek Divide	5300	2/27	89	33.2	9.8	18.4
Bly Mountain	5090	2/25	40	13.0	5.6	5.2 ^m
Bly 101 Ranch (PP&L)	4800	2/27	16	5.1	--	1.0
Chemult	4760	3/3	46	14.5	6.0	9.7
Chiloquin (PP&L)	4187	2/28	22	6.6	--	0.5
Cold Springs Camp	6100	2/28	118	42.2	18.7	27.5 ^h
Crazyman Flat ^e	6100	2/26	48	15.4	4.3	7.7 ^m
Crowder Flat ^e (Calif.)	5200	2/26	26	8.3	0.0	2.0 ^m
Crystal (PP&L)	4200	2/27	56	21.5	3.8	7.6
Diamond-Crater Summit	5800	2/24	106	37.1	19.5	30.5 ^h
Diamond Lake Junction (97)	4600	2/24	38	11.3	5.1	6.2 ^h
Dog Hollow ^e	4900	2/26	12	3.8	0.0	0.4 ^m
Finley Corrals ^e	6000	2/26	70	22.4	9.4	12.6 ^m
Fort Klamath (PP&L)	4150	2/24	40	8.2	2.4	3.1
Fourmile Lake	6000	c				
Gerber	4850	2/28	20	6.4	2.4	1.8 ^h
Harriman (PP&L)	4200	2/28	43	12.9	--	2.7 ^h
Hyatt Prairie Reservoir	4900	2/28	56	19.4	1.9	7.4 ^h
Kirk (PP&L)	4533	3/2	53	9.0	--	5.5 ^m
Lake of the Woods	4960	2/27	54	16.1	5.3	10.7
Park Headquarters	6450	2/28	160	59.4	35.6	47.5
Pelican Guard Station	4150	2/27	33	10.7	0.0	3.1 ^h
Quartz Mountain	5320	2/28	40	12.9	2.5	5.8
Quartz Mountain (PP&L)	5504	2/28	45	14.7	4.8	6.5
Seven Lakes #1	6800	2/26	163	58.8	26.5	45.6
Seven Lakes #2	6200	2/25	137	47.4	24.1	32.1 ^h
State Line ^e (Calif.)	5750	2/26	48	15.4	1.5	7.5 ^m
Strawberry ^e	5760	2/26	45	14.4	3.4	6.6 ^h
Summer Rim	7200	2/27	60	22.2	11.5	13.8
Sun Mountain	5350	2/24	88	31.0	14.0	20.8
Sycan Flat ^e	5500	2/26	36	11.5	0.0	5.9 ^m
Taylor Butte	5100	2/20	35	10.4	2.5	5.3 ^h
Yamsey (PP&L)	4600	b				

WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of

MARCH 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER



GENERAL OUTLOOK

The prospects are for above average water supplies in the spring and summer of 1969 in Lake County, assuming normal weather conditions for spring.

SNOW COVER

Water content of the mountain snowpack is 187 per cent of the average for March first, compared to 195 per cent of average last month.

PRECIPITATION

The precipitation for the area during the November-February period is 121 per cent of normal and for the month of February is 87 per cent of normal, as reported by the U. S. Weather Bureau.

SOIL MOISTURE

Upper watershed soils are at 80 per cent of their available water-holding capacity.

RESERVOIR STORAGE

Cottonwood Reservoir now holds 1,200 acre feet compared with an average for March first of 3,200 acre feet. Drews Reservoir contains 15,100 acre feet compared with an average March 1 reading of 38,300 acre feet. No report is available for Thompson Valley Reservoir. With average weather conditions during the remainder of this season, all reservoirs should fill to capacity.

STREAMFLOW

Forecasted streamflows for the March-June period for streams in the area are as follows:

<u>Station</u>	<u>Volume</u>	<u>% of 1953-67 Average</u>
Chewaucan River near Paisley	112,000 a.f.	133
Twentymile near Adel	38,000 a.f.	165
Deep Creek above Adel	125,000 a.f.	176
Honey Creek near Plush	30,000 a.f.	171
Drews Reservoir net Inflow (Mar-July)	93,000 a.f.	202

Report prepared by

TOM GEORGE

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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.)

March 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Chewaucan River	Excellent	Average
Crooked Creek	Excellent	Average
Deep Creek	Excellent	Average
Dry Creek	Excellent	Average
East Side Goose Lake	Excellent	Average
Guano Lake	Excellent	Average
Honey Creek	Excellent	Average
Lakeview Water Users Assn.	Excellent	Average
Rock Creek (Hart Mtn.)	Excellent	Average
Silver-Buck Creeks	Excellent	Average
Summer Lake	Excellent	Average
Thomas Creek	Excellent	Average
Twenty-mile Creek	Excellent	Average
Warner Lakes	Excellent	Excellent

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Cottonwood	8.7	1.2	2.4	3.2*
Drews	63.0	15.1	44.8	38.3
Thompson Valley	19.5	b	--	--

*Average for years of record (in base period) after reconstruction.

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of March 1, 1969

NO.	NAME	FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
		NO.	NAME				
3840	Chewaucan near Paisley			112	March-June	84	133
3715	Deep above Adel			125	March-June	71	176
3385	Drews Reservoir net Inflow d			93	March-July	46	202
3785	Honey near Plush			30	March-June	17.5	171
3900	Silver Creek near Silver Lake			31	March-July	21	148
3660	Twenty-mile near Adel			38	March-June	23	165

SOIL MOISTURE

STATION	PROFILE (Inches)		SOIL MOISTURE (Inches)					
	NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Camas Creek	5420	42	14.5	2/27	12.9	12.9	12.0	12.0
Quartz Mountain	5230	48	15.3	2/28	11.0	7.5	8.9	8.9

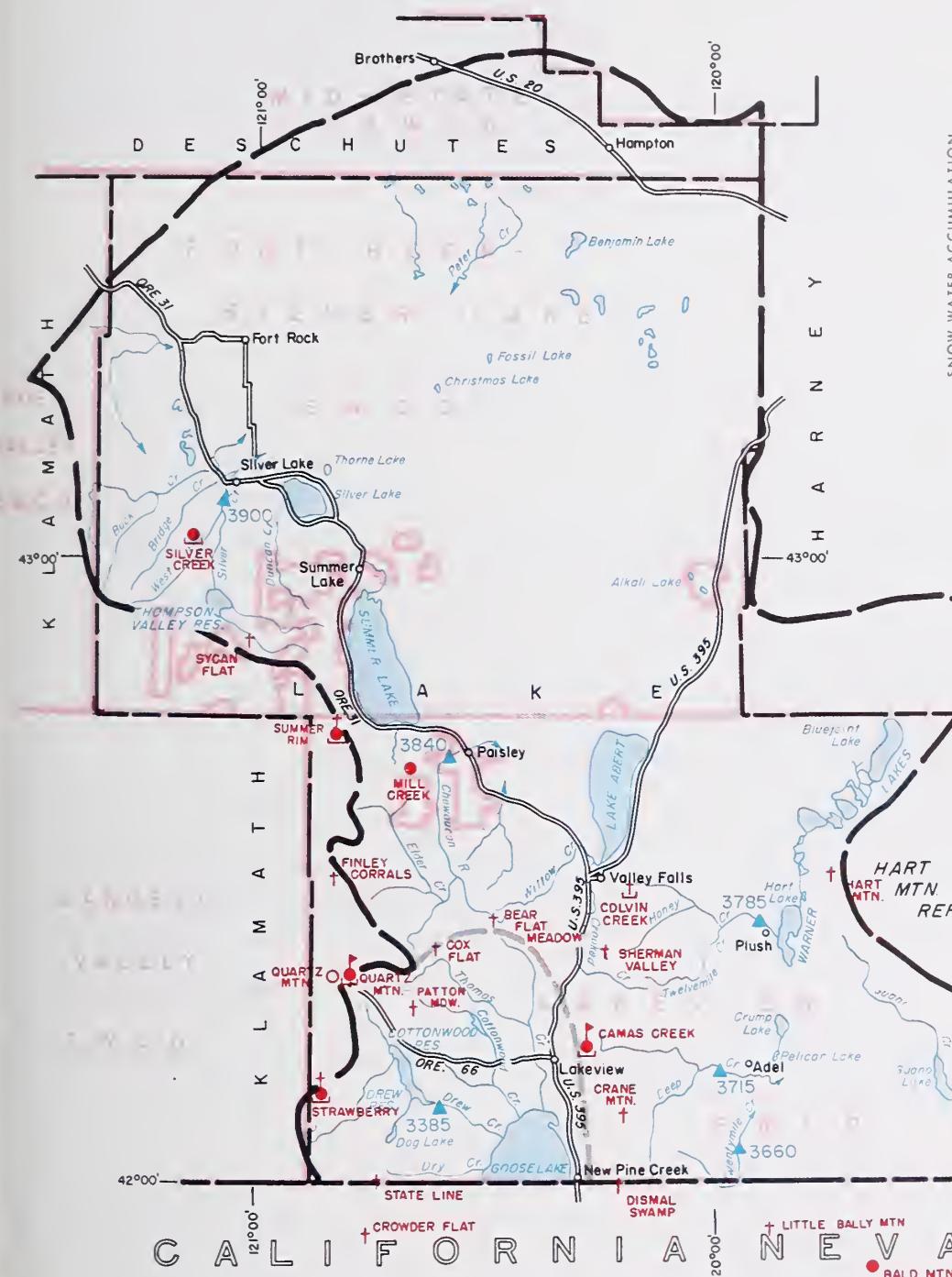
SNOW

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)
Adin Mountain (Calif.)	6350	2/27	64	22.2	8.2
Bald Mountain e (Nev.)	6720	2/28	28	8.4	1.0
Bear Flat Meadow e	5900	2/26	50	16.0	6.5
Camas Creek	5720	2/27	54	16.6	4.9
Cedar Pass (Calif.)	7100	2/27	66	21.0	10.6
Colvin Creek e	6550	2/26	30	9.0	0.0
Cox Flat e	5750	2/26	46	14.7	2.2
Crane Mountain	6020	2/26	24	7.2	0.0
Crowder Flat e (Calif.)	5200	2/26	26	8.3	0.0
Dismal Swamp e (Calif.)	7000	2/26	60	19.8	10.5
Finley Corrals e	6000	2/26	70	22.4	9.4
Hart Mountain e	6350	2/26	16	4.8	0.0
Little Bally Mountain e (Nev.)	6600	2/26	22	6.6	0.0
Mill Creek	6200		Discontinued		
Patton Meadow e	6800	2/26	68	21.8	9.4
Quartz Mountain (PP&L)	5504	2/28	45	14.7	4.8
Quartz Mountain	5320	2/28	40	12.9	2.5
Sherman Valley e	6600	2/26	51	16.3	4.2
Silver Creek	4900	2/28	23	6.3	0.0
State Line e (Calif.)	5750	2/26	48	15.4	1.5
Strawberry e	5760	2/26	45	14.4	3.4
Summer Rim	7200	2/27	60	22.2	11.5
Sycan Flat e	5500	2/26	36	11.5	0.0

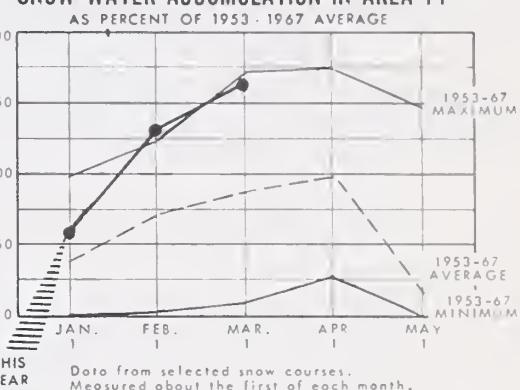
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

LAKE COUNTY, GOOSE LAKE WATERSHEDS

10 0 10 20 30
SCALE IN MILES



SNOW WATER ACCUMULATION IN AREA 11



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station
- Precipitation Gage

Lake County, Goose Lake Watersheds

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of

MARCH 1, 1969

**U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

GENERAL OUTLOOK

Above normal water supplies are in prospect for water users in Harney Basin for the spring and summer of 1969.

SNOW COVER

Water content of the mountain snowpack in local watersheds is 150 per cent of the March first average compared to 154 per cent for February first.

PRECIPITATION

Winter precipitation for November 1 through March 1 was 148 per cent of normal. The precipitation for the month of February was 99 per cent of normal. This data was reported by the U.S. Weather Bureau.

SOIL MOISTURE

The moisture in the soil below the mountain snowpack is at 93 per cent of capacity in the south half of the area and 81 per cent of capacity in the north half of the area.

STREAMFLOW

Forecasts of the expected streamflow for the April-September period of 1969 are as follows:

<u>Station</u>	<u>Volume</u>	<u>% of 1953-67 Average</u>
Donner und Blitzen near Frenchglen	76,000 a.f.	138
Silvies near Riley	25,000 a.f.	140
*Silvies near Burns	105,000 a.f.	127
Trout Creek near Denio	16,800 a.f.	224

Report prepared by

TOM GEORGE

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1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley	Average	Average
Cow Creek	Average	Average
Donner und Blitzen River	Average	Average
Mill-Coffeepot Creeks	Average	Average
Rattlesnake Creek	Average	Average
Silver Creek	Average	Average
Silvies River	Average	Average
Soldier-Prather Creek	Average	Average
Trout Creek	Excellent	Average
Whitehorse Creek	Excellent	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) March 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of March 1, 1969

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
				AVERAGE	AS PERCENT OF AVERAGE ⁱ
3960	Donner und Blitzen near Frenchglen	72	March-June	52	138
		76	April-Sept.	55	138
4030	Silver near Riley	25	April-July	17.9	140
		125	March-June	99	125
3935	Silvies near Burns	105	April-Sept.	83	127
		17.0	March-July	7.7	221
4065	Trout near Denio	16.8	April-Sept.	7.5	224

SOIL MOISTURE

STATION NAME	PROFILE (Inches)		SOIL MOISTURE (Inches)			
	DEPTH	CAPACITY	DATE	THIS	LAST	2 YEARS
				YEAR	YEAR	AGO
Blue Mountain Springs	5900	42	16.9	2/26	10.6	11.3
Fish Creek	7900	48	15.0	b	10.2	10.7
Folly Farm	4450	30	12.5	b	--	--
Silvies	6900	48	16.4	3/3	15.2	13.8
Snow Mountain	6300	48	16.7	2/25	13.6	11.5
Starr Ridge	5150	36	10.6	3/3	10.6	8.8
Stinking Water	4800	48	21.9	2/27	21.5	--
Willow-Bald	5000	24	6.6	2/25	6.2	4.2

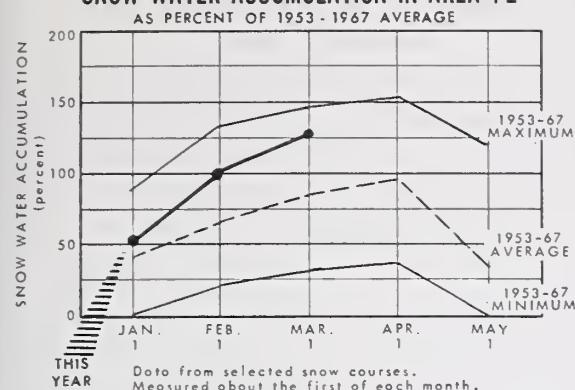
SNOW

SNOW COURSE NAME	CURRENT INFORMATION			PAST RECORD	
	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT	(Inches)
				LAST YEAR	
Blue Mountain Springs	5900	2/26	54	17.0	9.7
Buck Pasture ^e	5700	2/27	24	7.9	0.0
Buckskin Lake ^e	5200	2/27	7	2.3	0.0
Call Meadows ^e	5340	2/27	26	7.5	0.0
Crow Camp ^e	5500	2/27	22	6.4	0.0
Delintment Lake	5600	2/25	33	9.0	--
Denio Creek ^e	6000	2/27	9	3.0	0.0
Disaster Peak (Nev.)	6500	3/1	70	29.0	3.4
Emigrant Butte	5000	2/25	25	7.4	--
Fish Creek	7900	3/3	78	28.7	13.0
Hart Mountain ^e	6350	2/26	16	4.8	0.0
Idlewild Camp	5200	2/28	29	8.5	0.2
Izee Summit	5293	3/3	29	7.2	2.8
Lake Creek	5120	2/26	41	11.6	5.7
Oregon Canyon ^e	6950	2/27	37	10.7	8.9
Rock Spring	5100	2/28	29	7.3	1.5
Silvies	6900	3/3	44	17.6	2.4
Snow Mountain	6300	2/25	47	14.0	7.4
Starr Ridge	5150	3/3	27	7.4	1.2
Stinking Water	4800	2/27	30	3.2	0.0
Trout Creek ^e	7800	2/27	38	13.7	4.3
"V" Lake ^e	6600	2/27	42	15.1	0.0

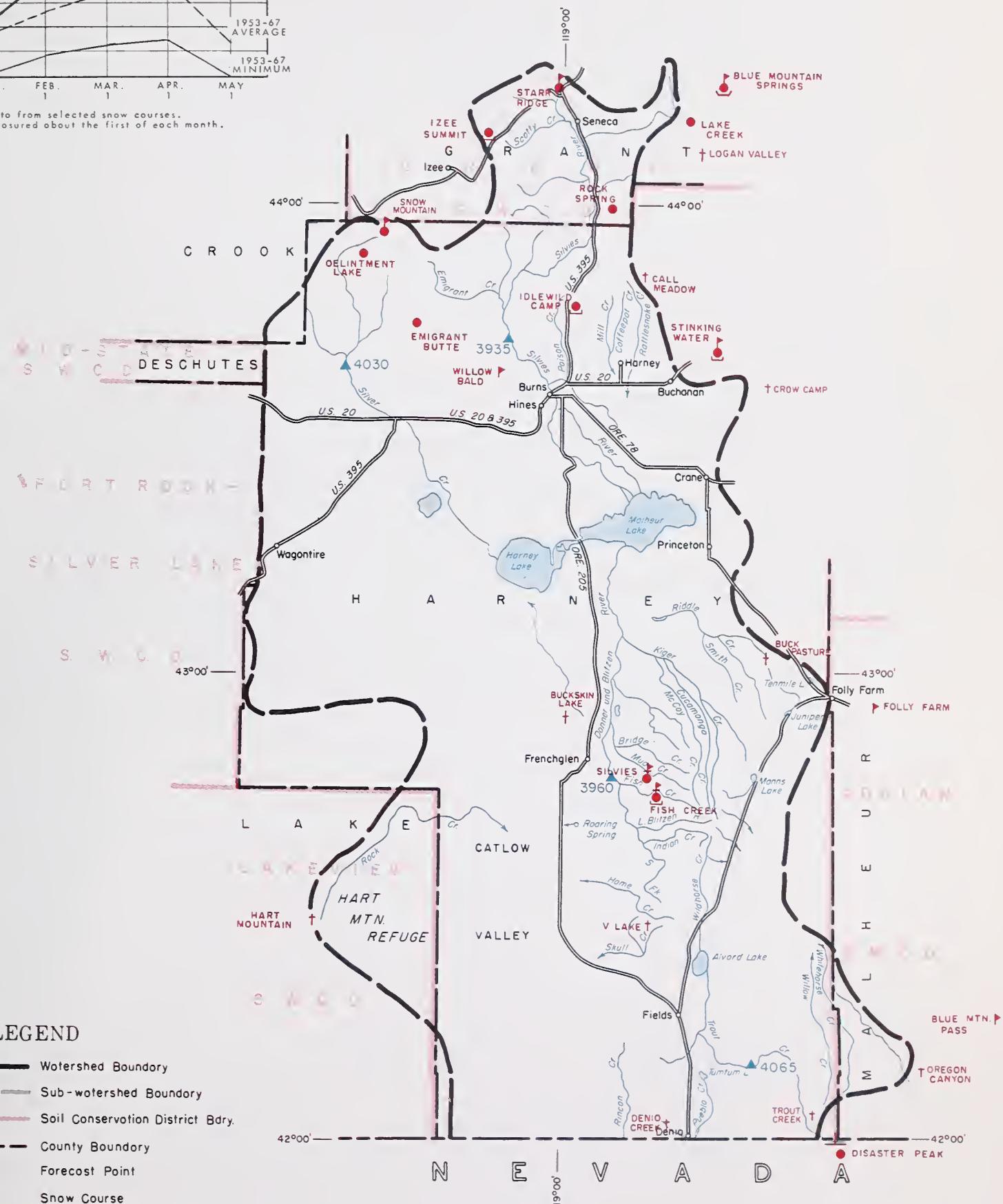
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HARNEY BASIN WATERSHEDS

SNOW WATER ACCUMULATION IN AREA 12

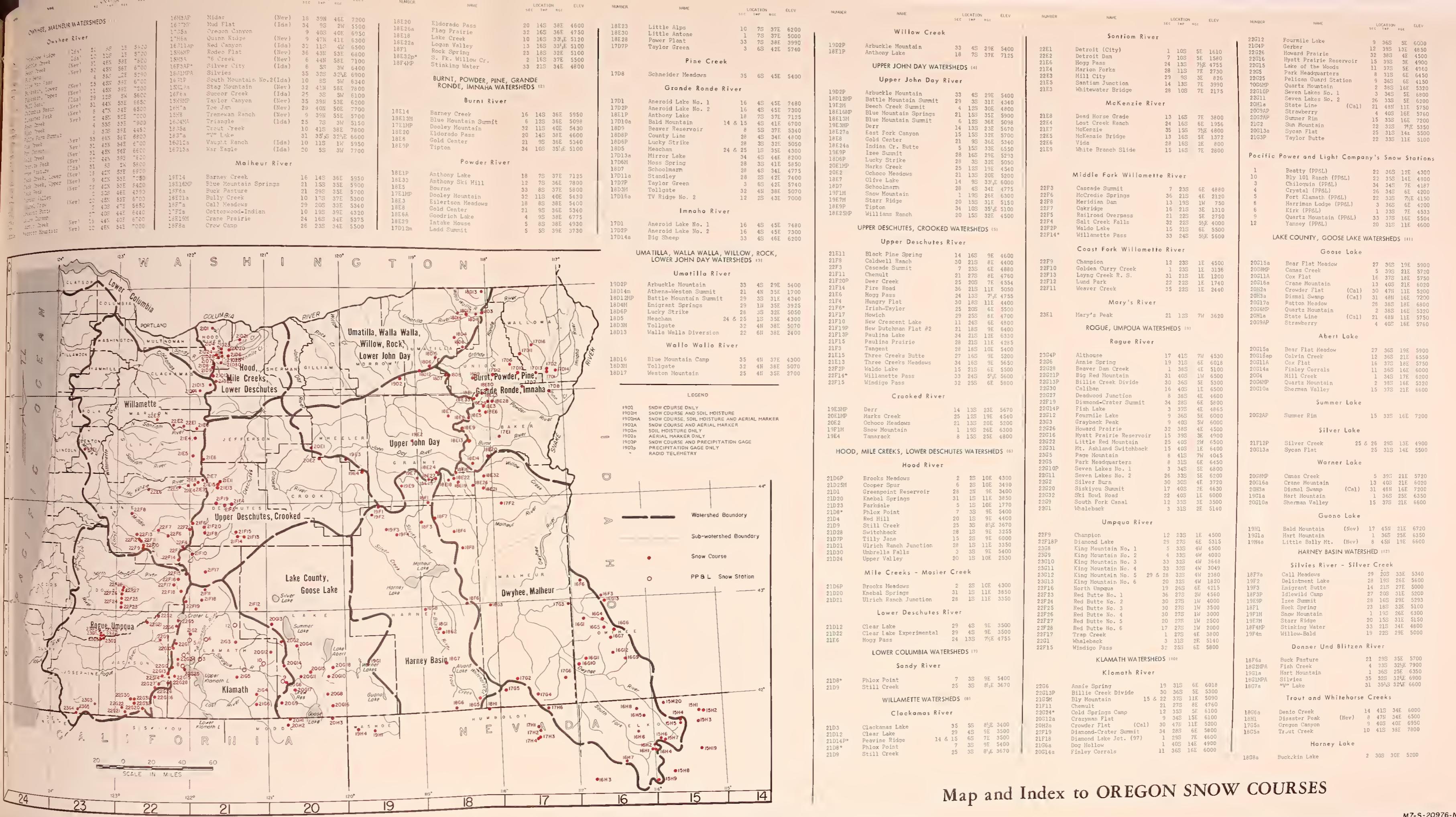


10 0 10 20 30
SCALE IN MILES



Harney Basin Watersheds

"The Conservation of Water begins with the Snow Survey"



Hari

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon State University
Oregon State Engineer and Corps of State Watermasters
Oregon State Highway Engineers
Soil and Water Conservation Districts of Oregon

COUNTY

Douglas County Water Resources Survey

FEDERAL

Department of Agriculture
Cooperative Extension Service
Forest Service
Soil Conservation Service
Department of Commerce
Weather Bureau
Department of the Interior
Bonneville Power Administration
Bureau of Land Management
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
National Park Service
Department of National Defense
Corps of Army Engineers

PUBLIC UTILITIES

Pacific Power and Light Company
Portland General Electric Company
California-Pacific Utilities Company

MUNICIPALITIES

City of Baker
City of La Grande
City of The Dalles
City of Walla Walla

IRRIGATION DISTRICTS

Arnold Irrigation District
Associated Ditch Companies
Burnt River Irrigation District
Central Oregon Irrigation District
East Fork Irrigation District
Grants Pass Irrigation District
Hood River Irrigation District
Jordan Valley Irrigation District
Juniper Flat Irrigation District
Lakeview Water Users, Incorporated
Medford Irrigation District
Middle Fork Irrigation District
North Board of Control - Owyhee Project
North Unit Irrigation District
Ochoco Irrigation District
Rogue River Valley Irrigation District
South Board of Control - Owyhee Project
Squaw Creek Irrigation District
Talent Irrigation District
Tumalo Project
Vale-Oregon Irrigation District
Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

Amalgamated Sugar Company
The Crag Rats, Hood River, Oregon

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